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[ORIGINAL COMMUNICATION.]

THE MANUFACTURE OF ANTISEPTIC DRESSINGS.*

BY B. LEROY SPILLER.

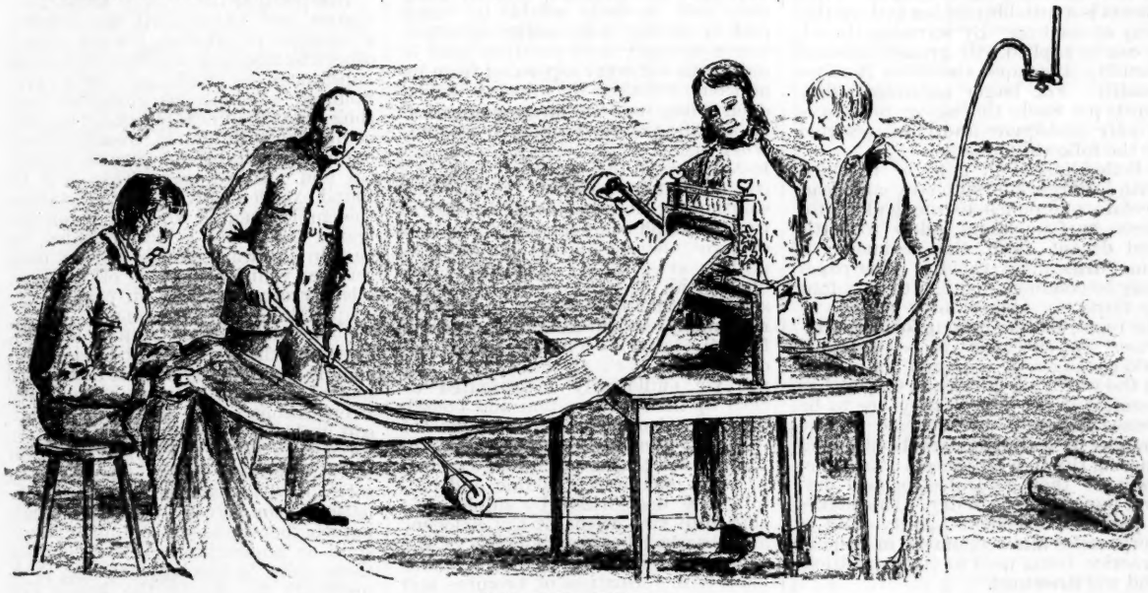
MANY formulas for carbolized gauze have been published since its introduction by Mr. Lister, but all consist essentially in impregnating cotton gauze with some substance capable of holding the carbolic acid. After an experience of over two years, in which time I have made many thousand yards of this preparation, and have tried most of the formulas published, I give the preference to that originally furnished by Mr. Lister, with slight modifications. Our formula is as follows:

	Parts.
Carbolic acid	1
Cosmoline	2
Resin	3
Paraffin	7

The use of "Cosmoline" is the modification referred to. Lister's formula, leaving out the Cosmoline, would read; resin, 5, the others remaining as above. Glycerin could be used with almost equal advantage, preference being given to cosmoline as it is cheaper and has more body. The resin and paraffin should be the best that can be bought.

To prepare the mixture, melt the paraffin and resin together (previously broken small), add the cosmoline, and when melted, pour in the acid slowly, stirring continuously. The acid should be placed on a steam or water bath that it may be near the temperature of the melted mixture; if this is not done, on adding the acid, much frothing will occur. This inconvenience is entirely obviated if the acid is hot.

The manner in which the gauze is impregnated with the mixture, is shown in the adjoining illustration. The gauze cut in any convenient length (about 20 yards) is folded lengthwise in four folds, stretched tightly, and rolled as shown in the sketch; these rolls are of convenient size, readily impregnated by the mixture and run freely through the wringer. All being now in readiness, a roll is placed in the mixture, and when saturated, is started through the wringer; an assistant turning the crank, and another receiving the gauze as it comes through, opening it out, that it may be more easily folded and free from creases. One man must give his whole attention to keeping the mixture supplied with gauze, seeing that it runs through evenly, regulating the heat, etc.; the excess of mixture is poured out and runs back into the pan. The gauze as thus made is very light colored, soft and pliable, and has given great satisfaction to all who have used it. It is essential that the mixture should not be heated longer than necessary; therefore everything should be in readiness by the time the ingredients are melted. If this is not done the product will be dark-colored and full of streaks, owing to the precipitation of resin. After the gauze is finished, it should be re-folded and packed in a box or other suitable receptacle, and tightly closed.



Making Antiseptic Gauze.

The gauze used is a peculiar unstarched fabric, known in trade as "colerain," selected on account of the facility with which secretions penetrate its meshes. It costs to manufacture carbolized gauze, about 6 cents per yard; the gauze itself costing from 4 to 4½ cents in large quantities. The cost of carbolizing is about 1½ cents per yard. The formula, as given, calling the parts pounds, is sufficient to carbolize 160 yards of the gauze.

Gauze used by surgeons in private practice is usually obtained from the manufacturer, pharmacists not being called upon to prepare it. I have noticed several formulas which could be used without the special apparatus described, and by which small quantities might be made, if occasion demanded. Such formulas are Bruns' and Lehn's and are as follows:

BRUN'S.

Resin	400	grammes.
Castor oil	40	"
Carbolic acid	100	"
Alcohol	2	liters.

LEHN'S.

Resin	4	parts.
Paraffin	5	"
Glycerin	2	"
Carbolic acid	2	"
Alcohol	20	"

Saturate the gauze thoroughly with either of these solutions, wring it out and dry it by hanging it up horizontally or by shaking it while spread out in lengths of about 7 yards. If done in the latter way, two persons holding the two ends, and shaking it up and down, it will be sufficiently dry in a few minutes. This gauze is very soft and pliable, and is free from the drawback of irritating the skin, which is sometimes the case when paraffin is employed, but it is necessarily more expensive.

The use of antiseptics is by no means confined to carbolic acid. Iodoform, thymol, oil of eucalyptus, and many other substances are used; physicians differing in their opinion as to their respective merits. I have had occasion to make small quantities of gauze prepared with the above antiseptics. The method of making these does not differ essentially from the last two given, the manipulation being the same; but in the case of iodoform it is necessary to use ether as the solvent.

SALICYLATED COTTON.

Another preparation used as a dressing is salicylated cotton, the antiseptic action of which is regarded by some surgeons as certain as that of carbolic dressing; it being claimed that it is less irritating, and, not being volatile, can be kept for a longer time without impairment of its qualities. This is prepared with cleanly, carded cotton, or, what is better, absorbent cotton. The solution is made by dissolving 100 grammes of salicylic acid in 1,000 grammes of alcohol, and adding 6 liters of water and 150 grammes of castor oil. 1,000 grammes of cotton are impregnated with this solution by kneading and turning it with the hands, until the solution is equally distributed; it is then put in a warm place to dry. This will yield a cotton containing ten per cent of the acid. The object of the castor oil is to prevent the dusting of the acid, on being handled, in the form of fine powder.

Other formulas are given (those of Bruns and Thiersch), which give good results, but are somewhat more expensive in that a larger amount of alcohol is used to saturate the cotton. In making the solution for salicylated cotton the object in view is to get the acid into

* Abstract of a graduation thesis presented to the Massachusetts College of Pharmacy.

solution and also have bulk enough to thoroughly moisten the cotton; thereby insuring the equal distribution of the acid. In the formula given I have used only sufficient alcohol to hold the acid in solution, making the solution to the required bulk with water. This is, of course, much cheaper, its only drawbak being that it takes longer to dry.

BORATED COTTON.

This may be made in the same way by substituting boric acid for salicylic acid, except that the boric acid may be dissolved in water by the aid of heat, which should be kept up during the saturation of the cotton, so that the acid will not crystallize upon it.

OILED PAPER.

Oiled paper makes a very good substitute for oiled silk when economy is necessary. The only method of making this paper that I have seen is by applying the oil with a brush. The oil is painted on both sides of the first sheet, laid flat on a board, and the remaining sheets, laid one upon the other, painting the oil only on the upper side of each sheet, which will oil the under side of the next one placed upon it. Fifty sheets is a suitable number to do in this way at one time. By warming the oil, it can be applied with greater ease and rapidity, the paper absorbing it more readily. For larger quantities (fifty yards per week) the above process is wholly inadequate, and I have resorted to the following process:

Boiled linseed oil is to be re-boiled with litharge, zinc sulphate, and lead acetate, one ounce to the gallon, for three or four hours; allow to settle and decant from the sediment; it thus dries more rapidly. The paper may be common manilla, twenty-four by thirty-six inches, fifty pounds to the ream, folding in four folds, lengthwise. The sheets are to be separated into packages of ten each; immersed in the warm oil, and when the oil has permeated the fibres, they are to be passed through the wringer in the manner described for carbolized gauze, passing through ten sheets at a time; they are then separated, opened out, and hung on lines to dry. This makes a paper of excellent quality, and is very useful and economical in hospital practice, being used to cover poultices and wet dressings.

Danger from Use of Antiseptic Gauze.

DR. RUPPRECHT, chief surgeon of the Diakonissen Anstalt of Dresden, states that antiseptic gauze, containing six per cent of carbolic acid, may, when employed in large dressings, produce death by absorption through the skin, while three per-cent gauze for adults and one-per cent for children, though amply strong to insure an aseptic condition of wounds, is practically harmless. Lister's, Arnold's and Kahnemann's gauze each contain about six per cent of carbolic acid.

Schuyler's Powder.—THIS is a sort of Dover's Powder, composed as follows:

Sulph. Morphine.....	1 part.
Camphor.....	6 parts.
Ipecac, pow'd.	6 "
Glycyrrhiza, pow'd...	25 "
Sugar, pow'd.....	25 "

—*Rev. farm.* and *Ph. Post.*

Alcohol from Melons.—A French investigator has succeeded in extracting alcohol from the pulp of melons. Alcoholic fermentation does not take place in the pulp, notwithstanding the sugar it contains, until sulphuric acid is added. Five liters of alcohol can be extracted from thirty kilogrammes of pulp.—*Br. Med. Jour.*

[ORIGINAL COMMUNICATION.]

POLYSOLVE; ITS PROPERTIES AND USES.

BY DR. A. MUELLER JACOBS, OF NEW YORK.

IF any tri-glyceride, such as almond oil, olive oil, or castor oil, be treated with 30 to 40 per cent of sulphuric acid, care being taken that the temperature do not rise over 50° C., and no sulphurous acid vapor be given off (which would indicate more or less decomposition), and if the mass afterwards be diluted with water and allowed to stand, an oily, acid layer, soluble in water, will separate, and may be removed with a separating funnel. This layer consists chiefly of a compound of sulphuric and oleic acid, having the composition: $C_{17}H_{33}.COOH.SO_3H$, and is known under the name sulpho-oleic acid. The mixture contains, besides, varying quantities of the unaltered tri-glyceride (oil) in solution, which may be removed almost completely, by shaking the aqueous solution with ether, carbon disulphide, oil of turpentine, etc., etc., or by subjecting it to dialysis.

The pure sulpho-oleic acid, which may also be obtained directly from oleic acid, is easily soluble in water and in alcohol, less readily in ether, has a strongly acid reaction, and is only with difficulty separated from its aqueous solution by mineral acids, even when used in large quantities. Its specific gravity is about 1.025, and, when boiled with water, or when allowed to stand for some time, either in its undiluted form or in aqueous solution, it decomposes with separation of sulphuric acid and formation of two new acids: one liquid, congealing at — 15° C. (probably oxy-oleic acid, $C_{18}H_{34}O_3$), and the other solid, melting near 70° C., and much resembling stearic acid, but differing from the latter by a larger percentage of oxygen. Both of these acids are not yet sufficiently investigated to clear up their composition and constitution. (Compare specifications of German Patent No. 17,264 of March 9th, 1882, issued to Dr. A. Müller-Jacobs.) Alcoholic solutions of iodine and bromine are decolorized by sulpho-oleic acid until two atoms of the halogens are absorbed by one molecule of the acid; that is, simple addition takes place with formation of bromine and iodine substitution products of the fatty acid series.

Sulpho-oleic acid forms two series of salts with bases: the salts of the alkalies and the acid salts of the alkaline earths and heavy metals being soluble, while the neutral metallic salts appear in form of amorphous or lake-like precipitates, which are completely insoluble in water and only with difficulty in alcohol or ether. The salts of the alkalies are neutral, oily or syrupy, clear, water-soluble liquids which may be heated, without decomposition, to 150° C. The ammonium-salt, however, is liable to decompose at ordinary temperature and, after standing some time, acquires an acid reaction. The aqueous solutions of these salts foam like those of soap, and act like the latter, by dissolving and cleansing.

Those salts of the alkalies which are not entirely neutral do not form clear solutions with water; the latter also appear milky or opaque, if unaltered tri-glycerides (oils) are present. This milkiness or opacity, however, is removed instantly by a small quantity of water of ammonia.

When concentrated and in as pure a state as possible, the alkali-salts of sulpho-oleic or sulpho-ricinoleic acid, as well as the free sulpho-acids themselves, mix readily and completely, with a great variety of organic compounds, for instance with liquid hydrocarbons, particularly those of low boiling point, with chlorine-, iodine- and bromine-derivatives of the same, with ethers and alcohols (even the di-tri-atomic, etc., ones), with organic sulphur compounds, such as carbon disulphide, oil of mustard, mercaptane, etc., and with all essential oils. They also dissolve varying quantities of sulphur, iodoform, solid hydrocarbons, such as naphthalin, naphthol, anthracene, and paraffin, the terpenes and camphenes. These liquid mixtures of sulpho-oleates and other bodies have the property of forming emulsions or even clear solutions with water. The limit of miscibility (in form of emulsion) or solubility varies considerably, and depends both on the degree of concentration of the sulpho-oleate serving as a menstruum, and on certain, little understood, physical properties of the substances mixed with it. For instance, 100 parts of pure neutral sulpho-ricinoleate of sodium yield, with 50 parts of ether, an almost clear solution; so also with 30 parts of volatile oil of mustard, 30 parts of petroleum-benzin, 100 parts of coal-tar benzol, 40 parts of carbon disulphide, etc., etc. Larger quantities of these substances yield permanent milky emulsions, foaming when diluted and shaken with water.

This peculiar behavior of the sulpho-oleates, and particularly the sulpho-ricinoleate of alkalies toward many otherwise insoluble or difficultly soluble substances, as well as their pronounced saponaceous character and their great readiness of taking up and combining with liquids,* renders them eminently suitable for various technical and medical uses. They will be found excellent solvents for substances the employment of which, in a concentrated condition, is accompanied by certain untoward effects, or they may serve as vehicles in place of vaseline, oils, glycerin, etc., etc., in perfumery, soap-making, or in pharmacy.

Such mixtures of neutral sulpho-oleates of the alkalies with various insoluble or difficultly soluble bodies are named, by the author "Polysolve Preparations," and the liquid alkali-salt itself, forming the menstruum or solvent, is called "Polysolve" (from πολυς "*many*," and "*solvere*" "to solve"). This name is a general designation of the solvent, without indicating whether the base is sodium or potassium or ammonium. If any one of these salts is specially wanted, it is necessary to specify the base. For medicinal purposes the *sodium* salt is probably the most useful; the ammoniun salt is not suitable, owing to its property, already mentioned above, of becoming acid even at ordinary temperatures.

A compound resembling those above described, namely a clear, water-soluble mixture of the sulpho-ricinoleate of an alkali with unaltered tri-glycerides (oils) was introduced by the author some years ago into the art of dying, as a mordant, under the name "Turkey-red oil" (*Türkischrothöl;* see German Pat. No. 1488, Sept. 27th. 1877), and has since then been quite generally adopted. Its effect depends chiefly upon the fact that it very easily and completely yields up the dissolved tri-glycerides to the fibre, whereby the latter becomes *animalized*, that is, acquires the property of combining with coloring matters in the same manner as animal fibre.

The number of mixtures capable of being produced by the above-described solvent is so great, and their applicability so manifold, that I must restrict myself to mentioning only a few of

* According to Knapp (*Lehrbuch der chem. Technologie*), the cleansing effects of a soap-solution are chiefly due to its great affinity for liquids of all kinds (its *Benetzbarkeit*, or "wetability"), whereby the layer of air condensed upon the surface to be cleaned (the skin, woven fabrics, etc.), is displaced and a close contact established between the soap-solution and the substance, in consequence of which the impurities may be more easily and completely removed. In this respect, the sulpho-oleates of the alkalies are scarcely inferior to soap-solutions.

these preparations and their properties.

Polysolve with Benzin. Containing 40 or 50 per cent of benzin. A clear, oily liquid miscible with water to a milky foaming liquid, from which the benzin does not separate even after standing for days. This is a most excellent detergent, for removing stains from fabrics, since it unites the properties of soap and of benzin. If applied to a fatty stain, both constituents of the mixture dissolve the fatty matters, the benzin then volatilizes and the stain may be removed by simply washing with water, without leaving a greasy outline.

The same compound, perfumed with some essential oil, may also be used advantageously for washing the hands.

In place of benzin, *Oil of Turpentine* can be employed for the same purposes.

Polysolve with (50 per cent of) Carbon Disulphide. It is well known that liquid or gaseous carbon disulphide is a poison rapidly acting upon the lower animals. Yet its general application for this purpose is greatly hampered by its inflammability, and further by the circumstance that in a concentrated condition, it rapidly destroys the cell-membranes. These drawbacks disappear entirely when it is dissolved in *Polysolve.* This solution, diluted with 5 to 10 parts of water, forms an emulsion which is capable of the most universal employment as an antiparasitic and which is infallible in its effects, if it be sprinkled, for instance, upon plants affected with parasites (such as caterpillars, lice, fungi, etc.). Applied in this manner carbon disulphide evaporates more slowly than when used in any other way; at the same time, it is also more minutely divided and is better able to exert its parasiticidal properties.

Polysolve with (5 per cent of) Volatile Oil of Mustard. Is soluble in water to a clear liquid. Contains the active principle of mustard in a *soluble* form, and is, of all conceivable methods, the most convenient and effective for medical use. It may thus be added to a foot-bath, to plasters, etc., etc.

Polysolve with Iodoform, Chloroform, Ether or Camphor. The first is prepared by dissolving 1 to 3 per cent of iodoform in the boiling polysolve (sodium-salt). On cooling, the excess crystallizes out. Camphor is first dissolved in alcohol and then added to the polysolve. Chloroform or ether are simply mixed with it, in any desired proportion.

The absorption of substances thus dissolved, when rubbed into the skin, is accelerated by the polysolve which acts not only as a vehicle, but also as a crystalloid; the therapeutic effects of drugs, particularly those of iodoform, are thereby greatly increased. It is, however, necessary to ascertain by further experiments whether the polysolve, in its perfectly neutral condition, is free from all irritating or other secondary effects upon the skin. The experience thus far gained with it appears to speak entirely in its favor and to show that we have here a new pharmaceutical product likely to become a rival to vaseline in many of its applications. It is well known that petroleum ointment actually opposes or retards the absorption of medicaments applied to the skin, and thereby diminishes their therapeutic value. Besides, it is by no means always bland and harmless, but sometimes produces quite undesired effects.

Since the acid metallic salts of the polysolve are soluble, or to express it in another way, since the neutral metallic sulpholeates are soluble in an excess of the polysolve, it is easy to prepare solutions containing, respectively, mercury, arsenic, antimony, copper, silver, etc., etc., as base.

Polysolve with Sulphur (Thio-Polysolve). Sulphur is dissolved by the menstruum when heated, but, on cooling, most of it crystallizes out, about two per cent remaining in solution. A larger quantity may be incorporated by first dissolving the sulphur in carbon disulphide. Since the menstruum has the properties of soap, these sulphur preparations may be used as specifics against certain skin diseases (scabies, eczema, etc.), either in a concentrated form, or diluted with water.

Employment of Polysolve in Perfumery.—It may be predicted that the sulpholeates are destined to play an important rôle in perfumery, since they are miscible, almost in all proportions, with all ethereal oils and aromatic substances, while at the same time possessing the characters of a soap, that is, of an active detergent and of an oily, neutral, water-soluble body. On adding alcoholic extracts, or essential oils of jasmine, heliotrope, patchouly, magnolia, violet, ylang-ylang, etc., or eau de Cologne, or other compound essences to concentrated sulpholeates, very fine hair-oils are obtained, which may be diluted with water and are most efficient for cleansing the scalp, the hair, and even the face and hands, owing to the property before mentioned of readily combining with liquids. By dissolving innocuous coloring matters (such as aluminium-alizarate) in the polysolve, an excellent rouge may be prepared.

For the present, it will be sufficient to have directed the attention of physicians, pharmacists, and technologists to the interesting and practically useful combinations above cited. What other products may be obtained by mixing various bodies with polysolve, will be reserved for future experiments.

Finally, I would state that application has been made for a patent covering the above-named preparations.

Note.—L. Liechti and W. Suida (in *Mittheil. d. technolog. Gewerbemuseums in Wien*, 1883, August number, p. 7) regard the above-mentioned, water-soluble substance (sulpholeic acid), as a *glycerin*-compound having the composition:

$$\left.\begin{matrix} C_{18}H_{33}O_3 \\ SO_4 \end{matrix}\right\} C_3H_5.OH$$

$$\left.\begin{matrix} C_{18}H_{33}O_3 \\ SO_4 \end{matrix}\right\} C_3H_5.OH$$

and suppose it to be the glycerin-ether of mono-oxyoleic and sulphuric acid. The analytical figures appear to speak in favor of this composition; but the assumption is untenable, because the action of sulphuric acid upon oils, even when properly moderated, is accompanied by an *elimination* of glycerin, a fact which was established already by Frémy (*Annal. Chim. Phys.*, 65, 121). The same water-soluble body which I regard as a sulpho-acid may also be obtained from chemically-pure oleic acid; this fact alone sufficiently proves that it cannot have the composition of the glycerin-ether above-given. It is probable that the body examined by Liechti and Suida was not a definite chemical compound, but a *mixture* of sulphooleic acid and of a certain proportion of triglyceride (oil) dissolved therein; and that the elimination of glycerin which the authors found to occur on boiling the whole mixture with water is to be ascribed to a splitting-up of the dissolved oil under the influence of the acid.

Resorcin for Cystitis.

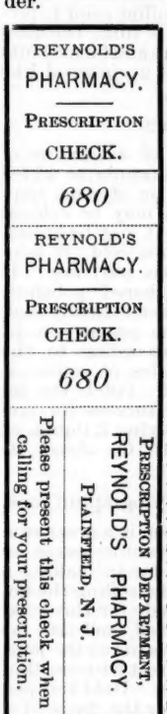
Dr. J. Andeer, *Centralbl. f. die Med. Wissen.*, reports extensive use of *resorcin* in acute and chronic cystitis, and claims for it almost specific curative power. He reports one hundred and fifty-six cases where, either by him or to his personal knowledge, it was injected into the human bladder with the best results in vesical catarrh. Acute cases have been entirely cured by the injection of a five-per-cent solution.

[Original Communication.]

DUPLICATE PRESCRIPTION CHECKS.

BY H. P. REYNOLDS.

At the last meeting of the New Jersey Pharmaceutical Association, I presented samples of a newly-devised prescription check which had proved itself in practice a great convenience. It was liked by those who examined it, and has been the occasion of some letters of inquiry. The accompanying illustration will enable any of your readers to provide themselves with the checks at little cost if they are willing to take the trouble to number and gum them by hand, and this will not be found a formidable task if the checks be printed six or eight on a sheet. Or they may be furnished complete by any printer having facilities for doing gummed work and numbering. They may be had of Mr. David Heston, Frankford, Philadelphia, at $5 a thousand, or at a less rate for a larger order.



Very little description is necessary. The coupons only are gummed, and are so scored in printing as to be easily torn off. When a prescription is received, the check is handed to the customer, and the coupons are affixed to the prescription by moistening one of them, the other being left projecting. When the medicine is made up and wrapped, the duplicate coupon is detached and gummed on the outside of the wrapper to await the presentation of the check. In practise a strong but not too thick linen paper has been found best adapted to the purpose.

The device is modestly offered for the convenience of the craft, and samples will be willingly mailed to any one sending a two-cent stamp for return postage.

Plainfield, N. J., December 11th, 1883.

Oxide of Zinc as a Substitute for Iodoform. — In the treatment of wounds, Dr. Petersen, of Kiel, considers zinc oxide a good substitute for iodoform. It is cheaper, and is not poisonous.

Salicylic Ointment for Eczema.

In the eczema of the scalp in children, Dr. Lassar recommends, after cleaning the surface,

℞ Acid. salicylic..... 1 g.
Tinct. benzoini..... 2 g.
Ung. petrolei.....50 g.
M.

to be employed two or three times a day.

In eczema of the non-hairy portions he employs

℞ Acid. salicylic ..... 2 g.
Ung. petrolei .....50 g.
Zinci oxidi,
Amyli.....āā 25 g.
M.

This paste is absolutely unirritating, and, besides, has the advantage that it does not retain the exudation upon the skin, but allows it to escape.—*Centralblatt für Chirurgie*, No. 28.

Synthesis of Nicotine.

JULIUS HENSEL, of Zurich, announces in the *Pharm. Zeit.* of Sept. 26th, 1883, that he has accomplished the synthesis of nicotine in the following manner: Benzoic acid is dissolved in acetone, and mixed with concentrated sulphuric acid. On warming, and the resulting precipitate is redissolved by the excess of acetone present. When cold the liquid is mixed with a solution of ammonia in absolute alcohol, which causes a separation of sulphate of ammonium, and yields a liquid containing the nicotine in solution, besides acetone and other products. On pouring the mixture now into not too large a quantity of water, the nicotine collects partly on the surface.

Clay-Pencils vs. Lead-Pencils.

LEAD-PENCILS made from graphite have at present a rival in pencils made from clay, and colored with suitable agents. Their mode of preparation is given as follows: 92 parts of clay, and 12.5 parts of soap are intimately mixed with enough of any aniline color to produce the proper depth of tint. The mass is subjected to pressure and formed into pencils which are put up in wood, like ordinary lead-pencils.

Poteline.

THIS] is the name of a mixture of gelatin, glycerin, and tannin, to which sulphate of barium, or of zinc, may be added, and which may be colored by vegetable colors. It may be kneaded, while warm; when cold, it may be used for numerous purposes. It can be turned, filed, bored, polished, and can be used for hermetically sealing bottles, etc. The proportion of ingredients varies according to the uses; for sealing bottles, of course, it must be used liquid. Potel, the inventor, uses it with success for preserving meat, by applying it liquid, at a temperature of 50–60° C.—*Journ. de Ph. d'Als.-Lorr.*

Remedy for Leaky Stylographic Pens.

THE stylographic pen is a great convenience, but no inventor seems to have succeeded thus far in making a joint which will prevent soiling the fingers with ink. A remedy for this leakage which has been tried, and thus far seems to be complete, is to rub the joint on which the fingers rest with the thin edge of a piece of wax. Hold the pen over a candle, lamp, or the flame of a match, till the wax melts, when it will lute the joint, so that no ink can escape through it.—*Sci. Amer.*

A Home-Made Fountain Pen.

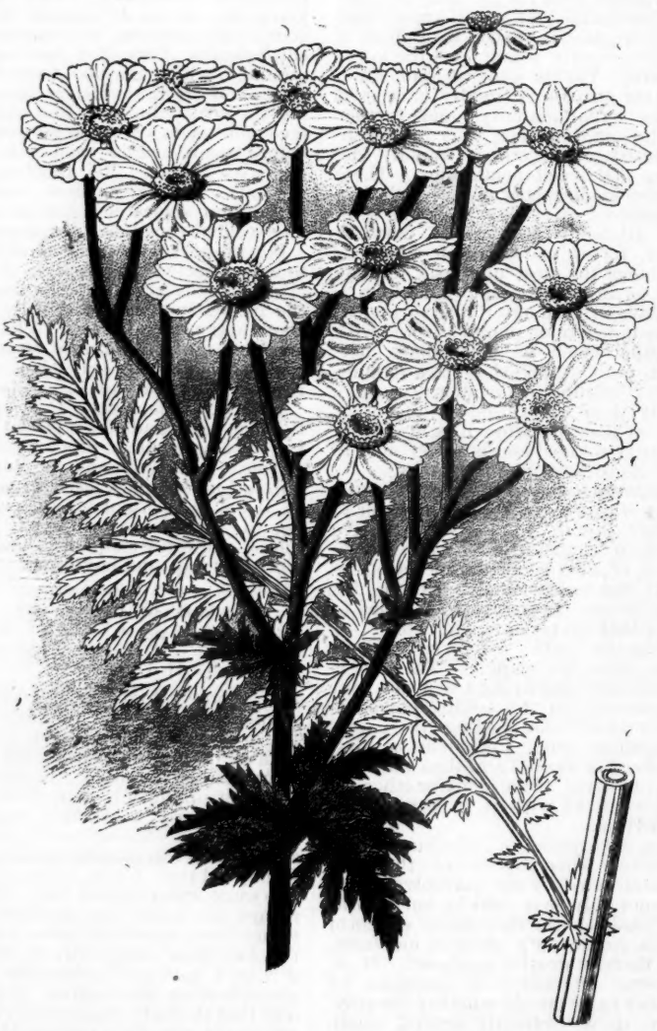
TAKE two ordinary steel pens of the same pattern, and insert them in the common holder. The inner pen will be the writing-pen. Between this and the outer pen will be held a supply of ink; when they are once dipped into the inkstand, they will last to write several lines of manuscript. It is not necessary that the points of the two pens should be very near together; but if the flow of ink is not rapid enough, the points may be brought nearer by a bit of thread or a minute rubber band. —*Scient. Am.*

Citrate of Lithium.

THOMPSON draws attention to the fact that citrate of lithium is by no means "deliquescent" as stated in the British and American Pharmacopœias. It may be prepared either in crystals or in form of powder. The percentage of water in the latter varies by about 5 per cent, according as the salt has been dried at 100° C. or 115° C., between which temperatures the last molecule of water is lost. The composition of the crystallized salt is constant and corresponds to the formula: $Li_3C_6H_5O_7.4H_2O$. Of the 4 molecules of water, three pass off at 100° C., the remainder at a higher temperature.

CHRYSANTHEMUM CORYMBOSUM OR PYRETHRUM.

THIS is a robust herbaceous plant, with elegantly-cut foliage and white and yellow flower heads, known also in gardens as *Pyrethrum corymbosum*. Under cultivation, it grows about four feet high, and probably higher in rich soil. It is as hardy and persistent as the allied species, *C. Parthenium*, syn. *Pyrethrum Parthenium*, of which the Golden Feather is a variety. In a wild state, it grows from one to three feet high, and it is a common plant in Central and Southern Europe, ranging from Portugal to Switzerland, Austria, and Turkey. Our illustration, which is from the *Gardener's Chronicle*, was taken from a plant in the herbaceous ground at Kew, where we recently noticed it as the best and most effective of its near allies.



The insecticide and insectifuge qualities of the dried and finely-powdered flower heads of different species of *Pyrethrum*, and the harmlessness of the powder to man, to other animals, and to plants, have long since been known. Used against various household pests, under the names "Persian insect powder," or "Dalmatian insect powder," it has hitherto been put up in small bottles or packages, and sold at high prices. The so-called Persian powder is made from the flowers of *Pyrethrum carneum* and *P. roseum*, while that from *P. cinerariæfolium*, a native of Dalmatia, Herzegovina, and Montenegro, is more generally known as Dalmatian powder.

Some interesting experiments made during the past year on different insects by Mr. William Saunders, of London, Ontario, show that the use of this powder may be satisfactorily extended beyond the household, while a series made by Professor Riley, in the summer of 1878, with the same powder on the cotton worm showed it to have striking destructive powers, the slightest puff of the powder causing certain death and the almost instant dropping of the worm from the plant. Repeated on a still more extensive scale, the present year, at Columbus, Texas, the powder proved equally satisfactory in the field.

Here, then, we have a remedy far exceeding any other, so far known, in efficacy and harmlessness to man and plant, and the only question has been to reduce its cost. Mr. Milco, a native of Dalmatia, has been cultivating the *P. cinerariæfolium* in California in constantly increasing area, for the past three years, and deserves great credit for his efforts in introducing it. The insect powders made from the California-grown flowers have proved to be very effective.

A Simple Method of Redistilling Ether.

DR. ADOLPH TSCHEPPE, of New York, in reviewing the article "Æther fortior" of the new U. S. (*Pharm. Rundschau*, 1883, 268) mentions a method of purifying and redistilling ether which, though not entirely new, yet will be so to many of our readers.

Take two ordinary 5-pint packing bottles, fit then with sound, conical perforated corks, and connect them together by means of a tin pipe about two feet long. Into one of the bottles put some pieces of caustic lime and fill it to two-thirds with washed ether. Into the other pour about two drachms of ether and evaporate these by putting the bottle into warm water. When the air is expelled and the ether

in the latter has just been evaporated, connect the bottles by means of the tin pipe, put the first bottle (containing the ether) into a vessel of warm water, and the second empty bottle into ice-water, whereupon the ether will rapidly distil over, and may thus be obtained of a low specific gravity; toward the end, the distillation is interrupted when the bottles may be cooled off by placing them in cold water, emptied, and then again charged as before. The more perfect a vacuum is produced in the bottles, the lower will be the temperature at which the ether distils over, and the smaller will be the difference between the temperature at which the ether will boil in one bottle, and that at which it will be condensed in the other. It is not advisable to use a glass tube instead of a tin pipe, as the former easily breaks. The stoppers [and also the inside necks of the bottles] must be conical to prevent the pressure of the external air pushing them into the bottles.

Are Nickel-plated Cooking and Eating Utensils poisonous?

NICKELED utensils were first made more than thirty years ago by the late Professor Boettger, but have recently become more popular, owing to the success that has attended Dr. Fleitmann's attempts to work nickel on a large scale, especially of malleable nickel that can be rolled. The increased favor which this brilliant silver-white metal has met with recently has given rise to the question of its poisonous quality. Dr. Fleitmann does not consider the metal as poisonous. The *Polytech. Notizblatt*, formerly edited by Dr. Boettger, thus discusses the interesting question.

At the present time metallic nickel and its salts are prepared in a very pure state, the copper and arsenic frequently present in nickel ores are almost completely removed. Especial care is taken to remove the arsenic, because it would injure the color of the nickel plate.

In regard to the supposed poisonous nature of nickel, it may be remarked that nickel and copper alloys have long been in use for domestic utensils, as well as copper itself. Such vessels must of course be protected from acids and always kept clean and bright. When this is done, none of the metal passes into a soluble form. All metallic salts are more or less poisonous, even the salts of iron, to which the salts of nickel are more nearly related than to those of copper, which are indeed quite poisonous. Metallic vessels should always be kept clean, and this is true of nickel too, and then there is no need to concern ourselves about its poisonous character. It would be very desirable to have thorough and careful experiments made upon the physiological action of nickel salts when in solution. Birnbaum has shown (in *Dingler's Journal*, ccxlix. 515) that solutions slightly acidified with acetic acid, as well as the juice of sour cherries, when left for some time in nickel vessels, take up considerable quantities of nickel, which confirms the view above expressed that acid solutions should be kept as far away as possible from all such utensils and vessels.

We may add that Dr. I. M. Da Costa, has been experimenting with nickel salts for medicinal uses, and finds that they have some efficiency in doses of one or more grains, three or four times a day. It does not produce the tonic effects of iron salts, but can scarcely be considered poisonous. The bromide can be substituted for other bromides and in smaller doses (see below, p. 28).

Corn, Wart, and Bunion Cure.

MIX 16 fluid ounces of collodion with 2 oz. (avoir.) of salicylic acid, and, when this is dissolved, add 1 oz. (avoir.) of chloride of zinc. Keep it tightly stoppered and away from lights or fire.

[ORIGINAL COMMUNICATION.]

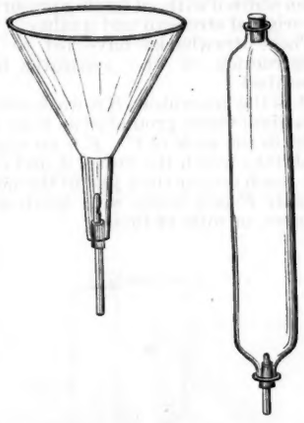
A SIMPLE SEPARATING FUNNEL.

BY CHARLES O. CURRIER.

A CHEAP and easily made substitute for the expensive glass stoppered separating funnels can be made in the following manner:

Take a glass tube four or five inches long and one-fourth of an inch in diameter. Close one end by fusing in the flame of a spirit-lamp. Three-fourths of an inch from this end file a hole with a rat-tail file moistened with oil of turpentine, in which a small quantity of camphor has been dissolved.

Fig. 1. Fig. 2.



In the small end of a funnel place a cork through which a hole has been made that will allow the tube to fit tightly. Insert the closed end of the tube in the cork so that the aperture in the side shall be just below the cork. When the contents of the funnel are to be drawn off, push the tube into the funnel until the hole is just above the cork; when the heavier liquid has passed out, pull the tube down until the hole is just below the cork, this allows the air to enter and the liquid remaining in the tube to flow out. Then by pushing the tube into the funnel as before the remaining liquid can be drawn off.

For volatile liquids a glass tube (Fig. 2), two inches in diameter and eighteen or twenty-four inches long with the ends drawn down to three-fourths of an inch in diameter for convenience in corking, makes an excellent separating tube.

STONEHAM, MASS.

Migraine Crayons or Pencils.

THESE pencils consist of the solid constituent of oil of peppermint, the so-called peppermint-camphor or menthol; the better ones contain, besides, some thymol or eucalyptol, the cheaper ones some ordinary camphor. The crystalline substance is melted, and cast in form of a small cone which is packed in a wooden case and represents the migraine-crayon.

These crayons are used for drawing across or rubbing the forehead, temples, etc., which at first produces a somewhat burning, but afterwards agreeable cool sensation. The odor being likewise pleasant, it is readily understood that the crayons are much liked by ladies, particularly in summer.—*Pharm. Zeit.*

Toothache Remedy.

A CORRESPONDENT of London *Electrician* gives the following as an instant remedy for toothache: With a small piece of zinc and a bit of silver (any silver coin will do), the zinc placed on one side of the afflicted gum, and the silver on the other, by bringing the edges together, the small current of electricity generated, immediately and painlessly stops the toothache.

Sugar as a Dressing for Wounds.

PROFESSOR LUCKE, at Strasburg, and Dr. Windelschmidt, at Cologne, report favorably on the use of powdered cane sugar as an antiseptic dressing for wounds. It has been used in connection with naphthalin (equal parts), or with iodoform (1 part, sugar 5 parts), or alone. The only difficulty so far is found to be the tendency of the patients to mistrust the dressing when they discover its nature, and on the other hand, to treat themselves, and pass from under observation.

NOTE.—Was it not the iodoform or naphthalin that did the work?—ED. AM. DRUG.

Hot Water in the Treatment of Colds.

DR. GEORGE R. SHEPPARD, Hartford, Conn., says, in respect to the use of hot water as a remedial agent in the treatment of inflammation of the mucous membranes, "I have used hot water as a gargle for the past six or eight years. In acute pharyngitis and tonsillitis, and in coryza, or cold in the head, if properly used in the commencement of the attack, it constitutes one of our most effective remedies, being frequently promptly curative. To be of service, it should be used in considerable quantity (a half pint or a pint at a time), and just as hot as the throat will tolerate. I have seen many cases of acute disease thus aborted, and can commend the method with great confidence."

Calabar Bean in Constipation.

IT has been observed as a result of the poisonous action of calabar bean on animals, that there is a tetanic spasm of the muscular coats of the intestines, which resuls in the forcible expulsion of the contents. This physiological property of the drug suggested to Dr. Schaefer (*Berlin. klin. Wochenschrift*) the employment of the drug in cases of obstinate constipation (obstipation), dependent on weakness of the muscular coats of the intestines, such as may be frequently met with in women and old men. The results of his experiments have amply justified his anticipations, based on the physiological properties of the drug, severe cases having yielded to the treatment in less than twenty-four hours after its administration. His formula consists of a solution of $\frac{1}{4}$ of a grain of extract of physostigma in $2\frac{1}{2}$ drachms of glycerin. Of this six drops are given every three hours.

Dry Treatment in Otorrhœa.

DR. BURNETT (*Amer. Journ. of Med. Sci.*) holds that the syringe should be used in this disease only when absolutely necessary for the removal of accumulation, and then only by the physician. Warmth and moisture favor the fungoid growths. The home treatment should consist of drying the ear with a twisted pencil of absorbent cotton. The physician should blow into the ear dry powders. For this Dr. B. recommends the following: Triturate equal parts (grain to the minim) of boric acid and tincture of calendula; allow it to evaporate, and rub one part of this with from one to two more parts of boric acid. The author holds that recovery takes place under this treatment in one-sixth the time required by the wet treatment.

NOTE.—This is precisely the treatment some time since suggested by Dr. Samuel Sexton, of this city.—ED. AM. DRUG.

SINCE Turnbull has adopted the boric acid treatment for purulent inflammation, it has become a pleasure to him to handle such cases, so uniform has been his success in treating this class of diseases, which before had been to him only objects of despair. So says Dr. Burnett, in the *Archives of Otology*.

Solubility of the Coloring Matter of Red Wines.

IT was formerly supposed that the coloring matter of red wines was dissolved out of the grape skins by the alcohol developed during the musting. Nessler pointed out that temperature influenced the extraction of the coloring matter, and Reihlen, in his method of wine-making, has shown that no alcohol whatever is necessary. F. Gantler *in the Berichte der deutschen chemischen Gesellschaft*, July 23d, 1883, now proves that the solution of the coloring matter of the skins of grapes is dependent upon the amount of tartaric acid present in the juice, and on the temperature at which the musting is carried out.—*Chemist and Drugg.*

Glycerin Ointment.

J. MULFINGER writes in the *Pharm. Centralhalle* that an ointment which protects the skin and keeps it soft is made with 225 parts of best glycerin, and 5 parts of powdered tragacanth, to which is added 5 parts of borax and 25 parts of rose water. The dry, powdered tragacanth, free from lumps, should be triturated with 50 parts of glycerin, after which the remainder of the glycerin may be added and heat applied. This mixture adheres well to a greasy skin, withdraws moisture slowly, and does not cause the irritation sometimes felt by delicate skins when glycerin is applied.

It is also an excellent excipient for pills of many kinds, and when so made they do not become hard and are easily assimilated. It also makes good extemporaneous bougies. Iodoform can be incorporated with it without the addition of other substances and the mass can be rolled into sticks no larger than a knitting needle. A thinner form is useful in dentistry for covering exposed nerves.

Camphor in Mixtures.

IN using yolk of egg to secure a subdivision of camphor when it is used as enemata it has been supposed that the oil of the yolk readily dissolved the camphor. It is found by experience, however, that this is not so and that refractory lumps of camphor are apt to separate. Gum-arabic is much to be preferred and the following formula is said by the *Gazette Hebdomadaire* to form a permanent emulsion:

Camphor.....	1 part.
Powd. gum arabic...	2 parts.
Decoction of linseed,	250 parts.
Yolk of egg.....	No. 1.

Mixture of Musk.

THE difficulty with which musk is reduced to powder, under ordinary circumstances, has induced P. Vigier to search for an improved method of preparing a mixture in which musk shall be suspended in a finely-divided condition.

This may be done by triturating musk with four times its weight of 95 per cent alcohol in a marble mortar, when it will be reduced to an impalpable powder in two or three minutes. It may then gradually be triturated with water and with syrup. When the mixture is properly made, the musk will require several hours before it will be deposited at the bottom. He quotes the following proportions as an example of such a mixture, in which the quantity of musk, however, is to be varied by the physician according to the circumstances of the case:

Musk.....	1 gm.
Alcohol, 95%.....	4 "
Syrup.....	30 "
Distilled water 100	"

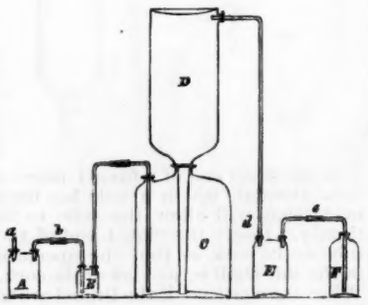
Journ. de Chim. et Pharm., 1883, 240.

APPARATUS FOR PREPARING CHLORINE WATER.

IT is well known that the preparation of chlorine water is connected with disagreeable features. If a suitable work-room is not available and its preparation must be conducted in the open air, it is difficult to maintain the proper temperature, and the operation is voted to be a nuisance by the neighbors. And if it is to be done at all, it is not uncommon that the operator at once prepares a quantity sufficient to last him for some time in order to avoid a frequent repetition of these difficulties. But, even when very carefully kept, some of the stock will spoil sooner or later, and a portion of it is probably often utilized without having preserved its original strength and quality.

These drawbacks have led to the construction of the apparatus here described.

A is the generator; *B* a wash-bottle; *D* a glass-vessel ground so as to fit airtight in the neck of *C*. *E* is an empty flask into which the tubes *d* and *e* do not reach deeper than just to the neck. Finally *F* is a bottle with solution of potassa, or milk of lime.



When using the apparatus, *C* is filled with distilled water, hydrochloric acid is poured into *A*, chlorate of potassium added to it, and the stopper *a* (of *A*) firmly inserted. The generated gas passes through the wash-bottle *B* and the connecting tube *c* into the water contained in *C*, pressing this upward into *D*. The pressure thus produced in *C* facilitates and hastens the saturation of the water with gas.

As soon as no more gas is evolved, *e* is closed by a pinch-cock, *d* is disengaged from *D*, and the contents of the two vessels *C* and *D* (after the latter are stoppered) shaken together until all free gas is absorbed.

When started, the apparatus may be kept going, if necessary, all night. For this reason, the vessel *E* is inserted to receive any liquid which might be sucked over from *F* in case a vacuum should be produced in *D* after complete absorption of the gas.

If the stoppers and joints are tight, a faint chlorine odor is perceptible only toward the end of the operation. The stoppers should be of india-rubber; or, common corks may be used if soaked in paraffin.

If the vessel *C* has a capacity of 1 liter, a quantity of 24 gm. of potassium chlorate and 240 gm. of hydrochloric acid (that is, 1 oz. of the salt to ½ lb. of the acid) will be sufficient to produce the requisite amount of gas.

This apparatus may also be used for the preparation of solution of hydrosulphuric acid (sulphuretted hydrogen water).—JOHANN HERTEL in *Pharm. Zeitsch. f. Russl.*, Oct. 30th, 1883.

Cream Mead.—A very agreeable drink may be prepared for convalescents as follows: Dissolve three pounds of white sugar in half a gallon of boiling water, and while cold add three ounces of tartaric acid previously dissolved in a pint of cold water.—*N. Y. Med. Times.*

Notes on Santonin.

As a supplement to the note on the administration of santonin by Dr. L. Lewin, in our last volume, p. 240, we may state here that Alexander Neuman* has made physiological experiments upon animals, which show that santonin is completely absorbed in the upper part of the intestinal canal except when it is given dissolved in an oil, for instance, castor oil. Indeed, even in this case, some of the santonin is absorbed in the stomach; yet the absorption is so much retarded that the largest portion has time to reach the lower intestine, where the worms lodge. The same author also found that santoninate of sodium is more quickly absorbed in the stomach—which might have been expected—than santonin itself.

Some interesting observations were made regarding the chemical behavior of santonin.

Pure santonin is not colored red by aqueous solution of potassa. But when santonin has been taken internally, and is eliminated through the urine, the latter assumes a red color both with aqueous and with alcoholic solution of potassa. A portion of the santonin is also eliminated per rectum as a rose-colored substance which is decolored by aqueous potassa and reassumes its tint when treated with hydrochloric acid.

Alcoholic solution of potassa is usually assumed to be a distinctive test for santonin, as it strikes with it a red color. Dragendorff had already noticed that this color reaction is more pronounced after the santonin had become yellow by exposure to light. To test the difference of sensitiveness of the test, Neuman dissolved some santonin in alcohol, and evaporated small portions on watch-glasses. When tested immediately on evaporation with alcoholic potassa, the smallest quantity of santonin recognizable through a red tint was 0.002 gm.; but, after the residues had been exposed to light for two days, as small a quantity as 0.0005 gm. could still be recognized.

Neuman even goes so far as to assert that alcoholic solution of potassa is no reagent at all for *unaltered* santonin. Taking in consideration the sensitiveness of santonin to light, and the probability that most specimens of santonin heretofore used to study the reactions had at some time or other been exposed to light, it would seem as if this assertion were well-founded.

Another characteristic reaction for santonin, first pointed out by Lindo,† and afterwards modified by Schauenstein,‡ has recently been studied by Dragendorff, and is directed to be performed as follows: Pure concentrated sulphuric acid is diluted with half its volume of water; and a solution is prepared containing 0.065 (or 1 grain) of ferric chloride (Fe_2Cl_6) in 100 parts of distilled water. The santonin sample is heated over the flame on a watch, glass, with a few drops of the abovementioned sulphuric acid until it becomes yellow. After cooling a short time it is mixed with a few drops of the solution of ferric chloride. If there were present somewhat considerable traces of santonin, a cloud is produced at the point of contact of the two liquids. On now again heating, the liquid clears up and assumes a handsome violet color, being bluish-violet with larger and reddish-violet with smaller quantities. As little as 0.0001 gm. of santonin still showed the reaction. The clear violet liquid after a while becomes cloudy. If too high a heat be applied, or too much ferric chloride be added, a turbid precipitate is at once produced, or dark flakes are

* Der forensisch-chemische Nachweis des Santonin, und sein Verhalten im Thierkörper. Inaug. Diss. von Alexander Neuman. 8vo, Dorpat, 1883. (Received from Prof. Dragendorff.)

† Pharm. Journ., viii., 464.

‡ Maschka, Handb. d. Gericht. Med., ii.

separated. Santoninate of sodium* also produces this reaction.

To a certain extent, this reaction has a feature opposite to that of the preceding—namely, its intensity is diminished when the santonin is exposed to light, while in the case of alcoholic potassa this exposure intensifies the color.

AN AUSTRALIAN DRUG-STORE.

The Australian Chemist and Druggist describes the store of Messrs Wm. Ford & Co. (Swift & Reed), of Melbourne, Australia, and says:

"The annexed engravings represent the premises as they now appear, after extensive additions and improvements lately completed, and we think we may fairly state that they are the most attractive and convenient of the kind in the colonies.

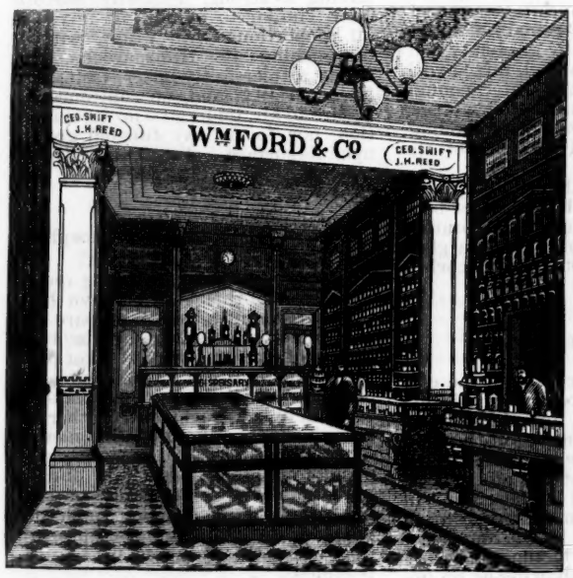
"The first section, or Retail and Dispensing Department, covers an area of forty by twenty feet. The arrangement of the counters and Dispensing Department, as shown in the engraving (from a photograph), is complete with the most modern appliances and conveniences necessary to facilitate the working of these two departments.

"The back section, or Wholesale Department, Store and Laboratory, is an extension of the same floor, and covers an area of sixty by thirty feet, approached by two pair of folding-doors leading out of the front section, and also by an independent entrance on the north side from Swanston-street. On this floor the clerks' and private offices are also located, being neatly partitioned off from the main body with figured glass sashes. The laboratory, too, occupies the western end of this section, and is separated by a lattice-work frame.

"The balcony, approached by the central staircase, is used for the storage of Druggists' Sundries, Chemical Glassware, American Herbs, and the lighter class of drugs, accommodation being also provided for the lighter class of labor employed in putting up Proprietary Articles and Perfumes.

"From the west end of the main floor, and underneath the staircase we descend into the cellar, which underlies the whole extent of the back section. This is really an invaluable addition, in a climate like Victoria, being set apart for the storage of acids, oils, bottles, and bulk goods. Provision is also made here for the reception and despatch of goods from an entrance into the yard, thence to Howie's lane, off Little Collins-street, the goods being passed to their respective floors by a Patent American Lift.

"In this section there is also a well-arranged set of bottle racks and washing troughs for the less scientific but very essential auxiliary to the successful working of the business."



A Melbourne Drug-store.

*The author calls this substance *natrium santonicum*, in place of *n. santoninicum*, which is not correct. See NEW REM., 1883, p. 29.

Colors for Show Bottles.

MR. G. C. CLOSE, of Brooklyn, at a meeting of the Kings Co. (N. Y.) Association, speaking of colors for show bottles, said: For a green solution he dissolves a little pure nickel in nitric acid and reduces with water to the desired depth of color. In so dissolving metals, care should of course be exercised in keeping the nitric oxide fumes from entering the room. By using a five-cent piece, enough copper is introduced to form a blue-green. He regarded a solution of potassium bichromate, rendered lemon yellow with sodium hydrate, as a satisfactory color for daylight.

Dr. Sheets said, that by dissolving one or two old copper cents in nitric acid, diluting with water and adding common salt, about one pound to a three-gallon bottle, or better, adding the salt till the desired green is produced, a very lasting color is obtained. A bottle in his possession had stood ten years without precipitation.

Mr. L. E. Sayre remarked that he had a solution so prepared, which has kept twenty years and seems to be improving.

Mr. J. L. Creuse said that by adding hydrochloric acid to a solution of copper sulphate, sufficient to turn the blue green, a very satisfactory color may be prepared.—*Weekly Drug News.*

Administration of Quebracho.

DR. J. M. MARIANI Y LARRION, of the Princess Hospital, Madrid, speaks highly of Quebracho, after a trial in forty-four varied cases (*Bull. Gén. de Thérapeutique*), and prefers the following formula:

℞ Ext. quebracho alc. (or hydro-alcoholic tincture)	2 to 4 gm.
Aquæ	150 "
Syrupi	30 "

M. Sig. One-fourth to be taken at a dose, to be repeated every 2 hours.

A syrup of quebracho was also employed in doses of two spoonfuls every second hour; and the extract or tincture was used, in doses of from .50 to 4 grammes.—*Phila. Med. Times.*

Quinidine and its Allies.

M. LABORDE, after an exhaustive study of the physiological action of quinidine, finds that it agrees with cinchonine and cinchonidine in producing convulsive movements of the body, while quinine appears incapable of doing so. Cinchonine and cinchonidine possess the convulsive property in a more marked degree than quinidine, which therefore holds a middle position between the alkaloids just mentioned and quinine; but its affinities are stronger on the side of the former group. An impure specimen of quinine gave the convulsive reaction, thus proving the presence of the other alkaloids, and establishing a physiological test for the purity of these substances.—*British Med. Journal.*

Quinine Intoxication.—A correspondent of the *Pharmaceutische Post* says that as a remedy for the relief of quinine intoxication, as he calls the over-stimulation caused by quinine in excessive doses, he has used ergot in several cases, and finds that to neutralize the cerebral effect of fifteen grains of quinine at least twenty grains of powdered ergot, or fifteen grains of ergotin, must be employed. With this remedy the most annoying tinnitus may be entirely removed during the administration of quinine.—*Quinologist.*

Administration of Quinine.

THE following summary gives the pith of notes on the admininistration of quinine, contributed by Dr. David Young, of Rome, to the *London Practitioner:*

1. Never to give quinine in antipyretic doses in cases where the bowels are confined and the secretion of urine is scanty.
2. In cases where it is being administered, and an increase of dose is desirable, this may be safely done, if the skin, bowels, and kidneys maintain their normal functional activity.
3. In many cases of remittent and intermittent fevers, the combination of the drug with chloride of ammonium, or a salt of potash or soda, is likely to be more easily tolerated, as well as more useful, than if it be administrated in a pure form.
4. During the administration of quinine, should a headache come on or increase in intensity, the case requires the most careful attention.

The French Pharmacopœia is reported to be in press, and is soon expected to appear.

"Maple Sugar."

IT is said that the flavor of maple syrup may be communicated to cane or glucose syrup by tincture of guaiacum deprived of its resin by precipitation by water. A great deal of the maple sugar and syrup now sold is said to be nearly pure glucose prepared in this way.

The Preparation of Rupert's Drops.

IT is stated in chemical text-books (for example, Roscoe and Schorlemmer's Chemistry, Vol. II., Part 1. Miller's "Elements of Chemistry," Part II.) that Rupert's Drops may be obtained by allowing molten glass to fall into cold water. I find that it is almost impossible to manufacture the drops in such a manner. I have used cylinders of different lengths with water of various degrees of temperature, with the same result, the glass almost invariably breaking up into a number of small fragments directly it strikes the bottom of the cylinder. The drops may, however, be very easily obtained by using a saturated solution of ammonium chloride—freshly prepared with cold water (6° to 8° C.) contained in a cylinder about 18 in. long, the increased specific gravity and cold insuring the almost complete cooling of the glass before it reaches the bottom of the cylinder.—I. TAYLOR *in Chem. News.*

The Preservation of Leeches.

THE proposition of a correspondent of the *Pharm. Zeitung* to preserve leeches in water containing a very small quantity of salicylic acid has elicited the unqualified approval of another correspondent who, living in a small place away from sources of supply, has been for years suffering through losses incurred by the death of many leeches which he has been compelled to keep in stock. On reading the above method, he first tried it with *one* leech, putting it, on May 18th, into a small glass with about 1½ oz. of water and 5 drops of a ½-per-cent solution of salicylic acid. On about Sept. 1st the leech was still healthy and lively, although the water had not been changed at all. A second experiment was also made during the summer, more than 100 leeches being put into a pot, with 4 or 5 liters of fresh water and 0.1 gramme (1½ grains) of salicylic acid. The leeches kept fresh, preserved their sucking power, and at the time of writing the report (about three weeks after putting them in the water) not a single one had died. He therefore strongly recommends the method to his confrères for trial.

Cement for Milk Glass.

WAECHTER describes the following method of preparing a white enamel for joining milk glass:

Melt together three parts of red lead, two of white sand, and three of crystallized boracic acid in a Hessian crucible. The melted mass is poured out on a plate of metal and finely pulverized. This is mixed with gum tragacanth and applied to the glass and the pieces pressed together. Finally, it is heated in a muffle, but not enough to entirely melt the enamel, but only to soften it enough to make it unite with the glass.

Anthracene has been found by Dr. Tommasi to possess a new property, namely, a sensitiveness to light, which will doubtless prove of value. Anthracene on exposure to light acquires different physical and chemical properties without any change in its composition. If a cold, clear, saturated solution of anthracene in benzol is exposed to the direct rays of the sun, it becomes turbid and deposits crystals, which have received the name of paranthracene.

Bromide of Nickel.

DR. DACOSTA, in the Philadelphia *Medical News* of Sept. 29th, advocates the use of a new salt, bromide of nickel, in epilepsy.

He gives doses of five grains in form of pill or syrup, three times a day, gradually increasing the dose to ten grains, three times a day.

A practical formula for the pills is as follows:

℞ Bromide of Nickel	gr. lx.
Powd. Althæa	gr. vi.
Extract of Gentian	gr. vi.
Alcohol	q. s.

Mix and make 12 pills.

For syrup:

℞ Bromide of Nickel	gr. 160.
Glycerin	℥ ss.
Water to make	℥ iv.

Dissolve the nickel in the water and add the glycerin.

Throw eight ounces of loaf sugar into a quart glass percolator and pour on the solution; pour back the syrup until the sugar is entirely dissolved, and make the measure eight fluid ounces with simple syrup.

This makes a handsome, green colored, stable syrup, containing five grains to two teaspoonfuls.

Bromide or hydrobromate of nickel can be easily made by gradually adding to carbonate of nickel, mixed with four times its weight of water, enough hydrobromic acid until effervescence ceases, heating the mixture to boiling, and adding a small quantity of the carbonate in excess.

This solution of the bromide is filtered and evaporated on a water bath to dryness, in a porcelain evaporating dish, stirring constantly with a glass rod. It should be kept in tightly corked bottles.

Syrup of Lactucarium.

JOS. W. ENGLAND considers the official process for preparing fluid extract of lactucarium, and that of preparing the syrup by means of the fluid extract, troublesome and unsatisfactory. He states that the official directions to have the lactucarium "in coarse pieces," when first macerated with ether, result in an imperfect removal of the inert lactucerin.

He proposes the following as an improvement on the official process for syrup of lactucarium:

Lactucarium (Allen's)	1 troy oz.
Powdered Quartz	2 troy oz.
Magnesium Carbonate	2 drachms
Sugar, granulated	13 troy oz.
Ether	½ fl. oz.
Glycerin	2 fl. oz.
Diluted Alcohol, Water, of each, a sufficient quant.	

Reduce the lactucarium to a fine powder, with the powdered quartz, macerate for several days, with the ether, decant as much as possible of the ethereal solution, add 2 fl. oz. of water, and remove the excess of ether, by cautious evaporation. When this has been done, add to this liquid 2 fl. oz. of glycerin, 8 fl. oz. of diluted alcohol, 1 troy oz. of sugar, and 2 drachms of magnesium carbonate.

Place in a tightly-stoppered bottle or flask, and digest in a water bath, at a temperature not exceeding 130° F., for twelve hours. Displace in a glass funnel through absorbent cotton, evaporate the percolate to 6 fl. oz., make up to 10 fl. oz. with diluted alcohol, filter, and add 12 troy oz. of sugar to the filtrate, dissolving with the aid of heat. Lastly add, when cold, enough syrup to make the finished product measure 1 pint.

Powdered quartz is used to reduce the concrete juice to a fine powder. It cuts and disintegrates far better than sand or any similar siliceous substance, and thus presents the drug in a more fit condition for solvent treatment.

Lactucic acid and lactucopicrin are both pretty soluble in water, and are obtained in solution when so treated. If not wholly dissolved, they are taken up in the further treatment with diluted alcohol and glycerin, which also dissolve lactucin, one of the bitter principles, but which is sparingly soluble in water alone. The use of magnesium carbonate is to serve several purposes. It combines with any free acids present, to render the liquid neutral, greatly lessens the excessive bitterness, and decidedly increases the activity of the solvents in the amount of the principles extracted. It, lastly, is valuable as a clarifying agent, when displacement is in order.

The purpose of prolonged digestion is to secure perfect solution and coagulation of all gum, resinous, or albuminous matter present. The evaporation of the percolate down to 6 fluid ounces is to prevent undue excess of alcohol in the liquid, while the last addition of diluted alcohol is to have the syrup definite in alcoholic strength to insure preservation.

The syrup is a clear, transparent reddish-brown liquid, almost black, having a strong, decidedly narcotic odor, similar to opium. It mixes, in all proportions, with water, without diminishing its transparency, possesses a pleasantly-bitter taste, free from acridity, and, on continued exposure to air, undergoes no decomposition, nor forms any fungoid growth upon its surface.—*Am. Journ. Pharm.*, 1883, 593.

Syrup of Calcium Lactophosphate.

SEVERAL writers, including one of the editors of this journal, have heretofore recommended to prepare the above-mentioned syrup by dissolving lactate of calcium with the aid of phosphoric acid instead of following the old plan of dissolving phosphate of calcium in lactic acid. R. Rother has lately likewise advocated this method (*Am. Journ Pharm.*, 1883, 607) and, owing to the fact that lactate of calcium is not everywhere readily obtained, has proposed a formula which provides for its extemporaneous preparation when the syrup is to be compounded.

The proportions given by the author are such that the relative proportions of calcium phosphate and lactic acid contained in the finished syrup shall be one molecule of the former of the former to six molecules of the latter (instead of four molecules, as it happens to be in the officinal syrup):

	Parts.
Calcium Carbonate	150
Lactic Acid, sufficient, or ab.	360
Phosphoric Acid, 50%	196
Sugar	6,545
Water, sufficient to make	10,908

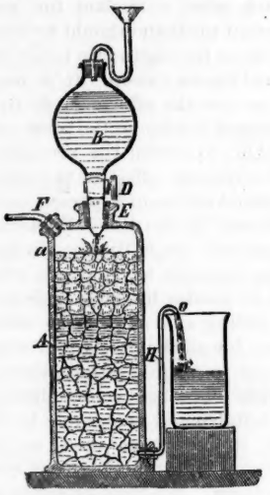
Mix the lactic acid with 1500 parts of water, and gradually add the calcium carbonate. If the mixture does not become clear, warm it gently and add lactic acid drop by drop, until a transparent solution is obtained. To this add the phosphoric acid previously mixed with 1,500 parts of water together with enough more water to make the whole weigh 4,363 parts. Then add the sugar, and when this has dissolved, with frequent stirring, filter the syrup through paper.

Naphthol in Scabies.—Guerin applies an oinment made by dissolving ten parts of naphthol in five parts ether and mixing it with the 100 parts of vaseline. Secluded from the air it will keep a long time.

A NEW GAS GENERATOR.

THE apparatus here illustrated is chiefly intended by Dr. P. Seidler for the generation of carbonic acid gas, hydrogen, or hydrosulphuric acid in laboratories.

It consists mainly of the cylinder *A*, the acid reservoir *B*, and the ascending tube *H*. When carbonic acid gas is to be produced, the cylinder is filled, up to about the mark *a*, with small pieces of marble, and enough concentrated solution of chloride of calcium added, through *E*, until it flows out at *o*. The reservoir *B* having been filled with hydrochloric acid, it is tightly inserted in the neck *E* and the faucet *D* opened so that a fine stream of the acid may flow upon the pieces of marble. The gas will be delivered through *F*, and a neutral solution of chloride of calcium will continue to flow off through *o*.



The strength of the current of gas may be regulated at will by means of the faucet *D*.

Most of the gas is generated in the upper layers in the cylinder. Near the bottom it is almost imperceptible.

Similarly, the apparatus is employed for the generation of hydrogen or of hydrosulphuric acid—zinc, sulphuric acid and a concentrated solution of sulphate of zinc being used in the former case, while ferrous sulphide, sulphuric acid, and a concentrated solution of sulphate of iron (ferrous sulphate) are employed in the latter case.—*Zeitsch. f. Anal. Chem.*, 1883, 529.

Hints about Corks.

A CORK should always be as far as possible adapted not only to the bottle or jar it is intended to "stop," but also to the fluid or substance intended to be preserved therein. Thus very volatile liquids can be kept far better without material loss with the aid of a really good cork properly prepared for its work than if a glass stopper of the average badly-fitting kind be employed. We will presume that everybody nowadays knows how to soften corks by "pressing" and boiling, etc., and also how to select good ones. If good sound corks, after being thoroughly "soaked," be immersed for a few hours in water at 130° F., containing about two and one-half per cent of gelatin and four or five per cent glycerin, and are then taken out and dried carefully, it will be found that the loss of any volatile fluid, such as chloroform, ether, or petroleum spirit, kept in bottles stopped with corks so treated will be comparatively insignificant.

Corks are discolored and rendered friable by various chemical solutions, nitric acid, tincture of iodine, and the permanganates being amongst the worst offenders in this respect; they may be protected, and rendered proof against the action of acids, alkalies, and oxidizing agents, by (after "softening" in the usual way) drying them and allowing them to digest at about 120° to 140° F. in a mixture of seven parts of vaseline and two parts of white paraffin wax until, when pressed under the warm fluid, no air bubbles are emitted from them. After being gently wiped and allowed to cool, the corks are ready for use, and they will then be found to resist corrosive liquids in the cold.—*Monthly Magazine.*

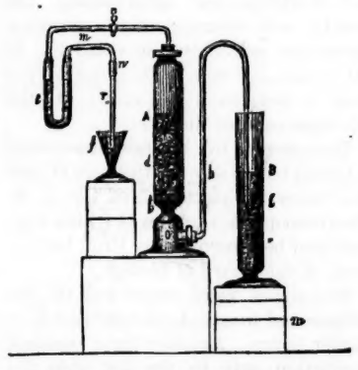
Remedy for Comedones.

THE remedy is acetic acid which is conveniently applied in the following way: make an ointment of kaolin (potter's clay), four parts; glycerin, three parts; acetic acid, two parts. Cover the part affected in the evening; after several days most of them come out by washing with pumice soap.—*Am. J. Phar.*

SULPHURETTED HYDROGEN APPARATUS.

JOSÉ R. DE LUANCO recommends an apparatus constructed as shown in the cut, for the generation of hydrosulphuric acid. His principal object was to avoid, after the receding of the acid from the generator, the influence of the oxygen of the air upon the wet fragments of ferrous sulphide, which are rapidly coated with a layer of basic salt.

A is the generator, closed below by a loosely fitting glass-ball (at *b*), upon which small glass-pearls are placed, and upon these the ferrous sulphide. The bottom part bears a tubulure, to which is attached a siphon (the outer end of which is slightly turned up) which is made to dip into a tall cylinder containing the acid. The generator bears in its neck a cork, carrying a delivery tube provided with a stopcock and finally ends in the delivery piece *n* which is made to dip into water.



To set the apparatus going, the cylinder *B* is raised by blocks until the level of the acid stands higher than the mark *d*. Then by sucking at *n*, the acid will be siphoned over. When the development of gas is to be discontinued, the faucet at *c* is closed, or rather rapidly closed and opened in succession, whereby the pressure of the remaining gas drives over the excess of acid into the cylinder without emptying it entirely. The cylinder is then placed so that the level of acid is below *d*, that is, below the line at which the glass-pearls in the generator are in contact with the pieces of ferrous sulphide.

One of the editors of the *Zeitsch. f. Anal. Chem.* (1883, 554) from which the above is taken, suggests that the suction at *n* may be rendered superfluous by fixing a cork in the neck of the cylinder *B*, inserting a short glass-tube, and blowing into it. This cork can easily be so adjusted that it will not interfere with a rapid raising or lowering of the cylinder *B*.

Sulphide of Zinc in Lupus.

DR. DUHRING, of Philadelphia, recommends the following formula as valuable for a wash in lupus erythematosus:

℞ Zinci sulphatis,
Potass. sulphidi..... āā ʒ ss.
Aquæ rosæ ..... ℥ iiiss.
Alcohol..... ʒ iij.

with the occasional addition of a few minims of glycerin.—*Phil. Med. Times.*

Cancer Remedy.

A WRITER in the *Br. Medical Journal* speaks highly of "cleavers" (*Galium Aparine*)* as a cancer remedy. He claims that a local application reduces the size and relieves the pain of the cancer, and writes that in Hertfordshire it is used also internally. The mode is to give an aperient and enjoin a simple diet; the patient to take ʒ v. of the juice of the plant twice daily. At the same time an ointment of the juice should be applied to the sore, frequently renewed. Though recovery is gradual, it is claimed that one ulcer was healed in three months.

Perosmic Acid.

THIS is a new remedy employed by Professor Winiwarter in cancerous and scrofulous swellings. It is used by injecting daily three drops of a one-per-cent solution of the acid, which treatment causes the tumor to soften and decrease in size, the dead tissue is thrown off, and disappears in about a month. No curative effects upon cancer itself have been observed from the remedy.

Hippurate of Sodium.

HIPPURATE of sodium is said to be now attracting attention as a remedy for diseases in which the excretion of uric acid in excess forms a prominent feature. A few months ago, Dr. Garrod called attention to the fact (*Lancet*, April 21st, p. 672) that solutions of the alkaline hippurates, when added to and allowed to remain for some hours with those of urates, caused the disappearance of uric acid, so that it could not, after the addition of hydrochloric acid, be detected either by the microscope or by the murexide test. This action of hippuric acid upon uric acid is supposed by Dr. Garrod to take place in the urinary organs of herbivorous animals, since uric acid is found in the urine of suckling calves, but not when the animals feed entirely on vegetable food, hippuric acid being then found in the urine instead of uric. The urine of herbivorous animals is generally alkaline, whilst that of man is acid. Dr. Garrod therefore prefers the use of alkaline salts of hippuric acid, giving also some alkaline citrate if there be abnormal acidity of the urine. He states that in cases of gout, gravel, and calculus he has obtained great advantage from the use of hippurate and benzoate of sodium, preferring the salts of potassium and lithium when he wishes to increase the quantity of the urinary excretion. Benzoate of sodium has a similar action to the hippurate, as might be expected from the fact that benzoic acid when absorbed from the stomach takes up glycerin, and becomes converted in the system into hippuric acid, and is thus thrown out in the urine. The use of a vegetable diet which would give rise to the formation of benzoic or hippuric acid in the system might, Dr. Garrod thinks, be devised for those who suffer from the diseases above mentioned.—*Pharm. Journal.*

* Another common name is goose-grass.

THE

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EDITORIAL.

ATTENTION has been drawn to the fact that, by distilling birch-bark with water, an essential oil is obtained, which is, to all intents and purposes, identical with true wintergreen oil, differing only by the absence of a peculiar terpene (probably only lost through bad manipulation) in the former, and by their different specific gravities.

It has also been found, during the past year or so, that oil of wintergreen is an excellent substitute for salicylic acid as a remedy for rheumatism, the results obtained with it at Bellevue Hospital (New York) showing that it is even preferable to the latter, as it has less tendency to disarrange the stomach.

Not long ago, it was observed that the oil of wintergreen administered to the patients appeared to be weaker and less effective than formerly. After considerable trouble, it was ascertained that the "oil of wintergeeen" received for some time past was the commercial oil always supplied when simply "oil of wintergreen" is demanded. Most or all of this oil has heretofore been consumed merely as a flavoring agent, particularly by confectioners, and the fact that it is used as an internal medicine has not yet had time to extend its purifying influence back to the original manufacturer or shipper.

When this apparent deficiency in the oil was noticed, and its origin ascertained, efforts were made to obtain real, genuine oil of wintergreen (made from gaultheria), and this was accomplished without much difficulty. Every respectable wholesale house should hereafter be in a position to offer the real oil of wintergreen for internal use. As no chemical tests are yet known which can distinguish the genuine from the false oil, reliance must be placed upon the character of the houses who deal in it. It requires special precaution to assure one's self whether an "oil of wintergreen" offered by the *distillers* in the country is genuine or not, since many either substitute the oil of birch for it entirely, or at least mix the two oils. But we know that the genuine oil *can* be had.

So far it appears that the true oil of wintergreen has a more prompt action and requires to be given in smaller doses than oil of birch.

THE State Board of Health, Lunacy, and Charity, of Massachusetts, has inaugurated a war against adulterators of drugs. For the present, the Broad appears to confine itself to wholesale dealers, who have, perhaps, better facilities for ascertaining the purity and strength of the preparations they sell than the retailer. At all events, it seems to be quite proper that a beginning be made at the wholesale end of the live.

The cases so far brought into court referred to the sale of tincture of opium below the standard of the U. S. Pharmacopœia, samples of which tincture had been assayed by Prof. Davenport, of the Board of Health.

Two firms were convicted of the offense and fined; both appealed to a higher court. Another firm escaped conviction only by the fact that the judge decided that the salesman who had sold the tincture was not an authorized agent of the firm. Other prosecutions are shortly expected, and if the efforts of the Board of Health are continued, in a spirit of fairness and impartiality, much good will no doubt result to the profession and the public.

In this connection it deserves to be mentioned that, at a recent monthly meeting of the Boston Druggists' Association, a resolution was adopted, asking the State Boord of Health "to send an official notice to any druggist who shall dispense an article in violation of law, and that prosecutions be made only when the article is sold after such notice has been sent." It seems to us eminently just and proper that this course should be adopted, as it will remove one of the most serious objections to a successful administration of the law, although it may not be requisite in law.

IN our last issue we published an abstract of an official report of the United States consul at Liege and Verviers, directed to the Secretary of State, in which the writer draws the attention of manufacturers of patent medicines to the fact that, in his opinion, there is not a better place for disposing of their wares than Belgium. Want of space prevented us from placing on record our own views and comments at that time, but we cannot let this number pass out of our hand, without expressing our surprise that a search after a market for Ameri can patent medicine should be considered one of the legitimate functions of a United States consul. It is humiliating to see the efforts made by the enlightened portion of the press and of the public, to curtail the promiscuous sale of nostrums, offset by the officious and official action of a person accredited abroad by the State Department who seems to forget that he is actually offering an insult to the people among whom he resides, by publicly declaring them willing and anxious to swallow and pay for all the trash that may be sent over to them. Surely, there are hundreds of other commodities far more suitable and acceptable to these people, if they were really so unsophisticated and gullible as our consul paints them. We shall probably soon hear of some of our consuls accepting an agency for the Kentucky or Louisiana Lottery, or for an oleomargarine factory, or some similar enterprise flourishing amongst us.

IN spite of the efforts of the Executive Committee of the National Retail Druggists' Association to enlist co-operation, there is, we regret to say, but little enthusiasm shown outside of the Committee itself, if we except one writer who is in no sense a retailer, and whose effort in this, as in other directions, impress one quite favorably with his skill in attracting public attention.

In Philadelphia, where the evils of rate-cutting are said to be very apparent, a well organized and earnest effort to form a local protective association has completely failed, and the proposition to organize a stock company in this city to cut out the "cutters" has, apparently, resulted in leading the general public to purchase fewer "patents" in anticipation of still lower prices when the Association stores are opened.

The feeling which now appears to be increasing among pharmacists is in favor of restriction of business to legitimate pharmacy. Some of the most successful retail establishments in this city (excepting those which surreptitiously deal in alcoholic drinks) are those which have suppressed, so far as possible, all business of other kinds, and developed, instead, special lines of manufacturing, in connection with a

carefully-conducted prescription trade. On the other hand, we know of one establishment which in former years was a favorite among physicians and whose label on a package was equivalent to a guarantee of the best pharmaceutical skill and excellence of materials. Of late, however, a change in the proprietor and a disposition to trade on the strength of former reputation, and at the same time to cut prices and push the sale of nostrums, has nearly estranged from it the confidence of physicians and driven away much of its most profitable business.

A FEW of our subscribers have expressed their regret that some of the reading matter of the AMERICAN DRUGGIST is so mixed with the advertisements that they will be unable to separate them, as formerly could be done. This speaks more highly for the value of the "outside matter" than we had supposed it would merit, and leads us to say that a little observation will show them that, while the matter on the advertising pages may, at the time of its publication, be of interest—like much of the reading matter contained in the daily or weekly papers—it is not, like that in the body of the journal, likely to be of permanent interest or worthy of being bound up and preserved for future reference. The Editors exercise some care in selecting for the main portion of the journal that which will prove of future as well as of immediate benefit to its readers, and will make liberal use of the columns adjoining the advertisements to give space for items of more ephemeral character. If, however, any reader should think it desirable to preserve an occasional item published there, he will usually find each article complete within the limits of the column; it will never have other reading-matter on its back, and on the side next to the edge of the leaf is a broad margin on which can be pasted portions which may run over into another column; precisely the arrangement, in fact, which will enable him to place the whole in a scrap-book without the necessity for leaving any portion loose so that the back of the cutting may be accessible, as would be the case with extracts cut from any other drug journal.

We will, moreover, again remind our subscribers that, with every leaf added to the advertising pages, *they* will get, in future, another column of this reading-matter. We can also promise them that we shall consume very little space in the body of the journal with editorial fault-finding, complaints that other journals take our articles without credit, advertisements of books which the editors or publishers sell, reminders to delinquent subscribers, etc. And we hope that we may not often be called upon to enter into such explanations, like the above, of matters which should be understood with the exercise of a little attention.

THE general principles adopted by the Commission for the elaboration of the Cuban pharmacopœia show a desire to bring the work up to the demands of the period, and will nearly all meet with approbation. Some of them, however, are not quite acceptable to our way of thinking and our experience, notably the resolution to divide the work into three parts: 1. Medicinal substances, such as they are obtained from nature. 2. Chemicals of definite composition. 3. Simple or compound remedies prepared from the above. We are decidedly of the opinion that a single alphabetical sequence is much more useful and advantageous. Everybody in the United States is glad that the old division into "Primary" and "Secondary List" and "Preparations," of former pharmacopœias is abolished.

Dr. Ramon Botet, to whom had been assigned to the duty of examining the contents of the officinal Spanish pharmacopœia, with a view of proposing the abolishment of antiquated articles, made a report in consequence of which not less than 315 articles of the Materia Medica and 232 pharmaceutical preparations are to be dismissed.

We consider this a great advance, and by perusing the report contained in the *Repertorio de Farmacia*, of December, 1883, we see that there is a real spirit of progress and emulation plainly visible in this work. If carried through with the same spirit, the result will be of great value to Spanish pharmacy and will extend its influence to the mother-country. It is to be hoped that the "tail will wag the dog" and wake it up.

Thefts in the Drug Trade.

SPEAKING of the considerable losses by theft on the part of dishonest employees, the *Oil, Paint and Drug Reporter* lately remarked that there are four places in this neighborhood where such goods are principally disposed of, two of them being in New York, one in Brooklyn, and one in Williamsburg. Illustrating the coolness with which some of the thieves carry on their business, it is said that recently a large box stood in the doorway of a New York drug establishment ready for shipment and containing many valuable orders for a western house. During the morning a truck backed up; the driver with some difficulty placed the box on board in the presence of a member of the firm and drove off. Subsequently inquiry was made about its shipment and an investigation revealed the fact that it had been stolen while a member of the firm, who thought that the truckman belonged to the establishment, watched the proceeding.

Fraudulent Norwegian Cod-Liver Oil, so it is said, has of late been sold in considerable quantities in New York by persons who make use of empty barrels formerly containing oil which was genuine. The spurious oil is said to be a mixture of Newfoundland and American cod and seal oils. One well-known New York house, who have made a specialty of their oil, have long been reported to derive their supply from the "mossbunkers" about the eastern end of Long Island.

Quinine in French Hospitals.—A Frenchman was convicted last year of putting French cinchonidine into pure sulphate of quinine of foreign manufacture, and then selling it as pure sulphate of quinine to the "Assistance Publique," for use in the hospitals. This body has lately stipulated that in future only sulphate of quinine of French manufacture will be accepted, and the *Repertoire de Pharmacie* (says the *Chemist and Druggist*) remarks, "We can only applaud this action, which is as intelligent as it is patriotic!"

Injury to the Liebig Statue at Munich.—On the night of November 7th, some unknown person applied some corrosive fluid to the statue of Liebig at Munich and occasioned great injury, the fluid eating into the marble. The injury effected has been examined by a scientific commission, including Baeyer and Pettenkofer, and they believe that it was accomplished by a mixture of strong acids applied by a syringe. They believe that the damage done can be repaired; but they say it will be a long time before the stains can be removed. The police offer a reward of 1,000 marks for the discovery of the perpetrator of this outrage.

THE British Mint has discarded carats and carat-grains, and will hereafter indicate the fineness of precious metals by decimals, in accordance with the usage long since adopted by the Continental mints.

THE annual death-rate of St. Petersburg is over 51 per thousand.

Correction.—A San Francisco correspondent calls attention to an error in an article on page 15 of this JOURNAL, for January, where graphite or plumbago is spoken of as carbonate of iron, instead of an allotropic form of carbon, as it really is.

New England Medical Register.—A new edition (1884), revised by Dr. Francis H. Brown, will shortly be published by Cupples, Upham & Co., Boston.

Lumbago may be quickly relieved by binding a piece of enameled cloth, such as is used to cover tables, over the loins outside of the flannel shirt. Profuse perspiration is produced, which rapidly relieves the pain.—*Sci. Amer.*

Treatment of Warts.—A plaster of black soap, applied each night for a fortnight, according to M. Vidal, will soften a wart so that it may be scraped off. The treatment by M. Cellier is to transfix the principal wart with the point of a pin, the head of which is then to be held in the flame of a candle until the wart is destroyed; it will drop off in a few days. The remaining warts will then usually disappear.—*La France Médicale.*

To Make Arnica Plaster.

TAKE French isinglass, 1 ounce; warm water, 1 pint; glycerin, 1 ounce; tincture of arnica, half an ounce. Soak isinglass in a little warm water, for twenty-four hours; then evaporate nearly all the water by gentle heat. Dissolve the residue in a little proof spirits of wine, and strain the whole through a piece of open linen. The strained mass should be a stiff jelly, when cool. Fasten a piece of silk or sarsenet on a wooden frame with tacks or thread. Melt the jelly, and apply it to the silk thinly and evenly with a badger hair brush. A second coating must be applied when the first has dried. When both are dry, apply over the whole surface two or three coatings of balsam of Peru. This plaster remains quite pliable, and never breaks.

Plastic Clay for Suppositories.

THE use of plastic clay as a convenient material for suppositories in some cases is recommended by Dr. Trippier. The ordinary sculptors' modelling clay is used, the medicaments being dissolved in water, and then worked into a mass; in this way, salts of iron and copper, alum, or even vegetable extracts may be incorporated by taking proper precautions. Dr. Trippier appears to contemplate supplying patients with the medicated clay, so that they can break off a portion and mould it between the fingers as required. Although the mass may easily be maintained of a proper consistence in a vessel placed in a plate containing water and covered by a bell-glass, it is liable to harden if exposed in the open air; but this may be prevented by the use of glycerin, which is said to have the additional advantage of giving stability to a potassium iodide mixture. The formula given for such a mass is: Clay, 500 grammes; water, 50 grammes; potassium iodide, 30 grammes; glycerin, 100 grammes.

Source of the Active Properties of Jequirity.

FURTHER experiments undertaken by MM. Cornil and Berlioz with a view to determine the general action on the body of the microbes found in an infusion of jequirity, *Abrus precatorius*, have led them to the conclusion that these bacteria are the sole active principle in producing the medicinal effects of the seeds. The infusion deprived of the bacteria by filtration after M. Gautier's process produced no pathological effects, while the subcutaneous injection of a solution of the crystallized principle, prepared by M. Chapoteau from the seeds, produced no appreciable effects (*Comptes Rendus*, xcvii., p. 679).—*Pharm. Jour. and Trans.*

"Salt Mouths."

A CORRESPONDENT of *The Druggist* says: My notion of a proper "salt mouth" is to have an amethyst or amber-colored bottle made in the shape of a can without shoulder. To have the lid too large for the glass can, to have an outside ring on the can, so that a ring of rubber, gutta percha, cork, or the like will protect the contents from the air. You can without trouble wash such bottle inside and out. Contents easily emptied. They can be made as pretty and showy as the ordinary salt mouth, and have the advantage of being approachable with the horn spoon and scoop. Also a slide should be made for a mica libel. In the top or lid is a good place for retail marks and cost price. The ordinary salt mouth, no matter what sort of glass, is difficult to cleanse. This, I think, obviates that trouble, and does not detract from the beauty of shelf-ware.

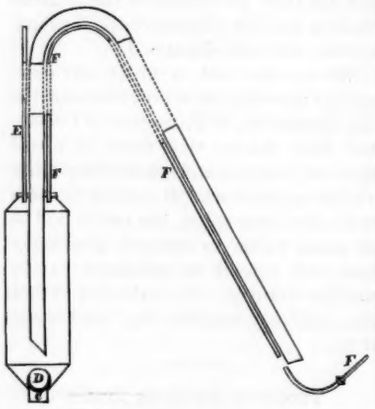
Boric Acid not Harmless.

THERE is a case reported in *Schmidt's Jahrbücher* following the use of an injection of a four-per-cent solution for chronic diarrhœa, and the *Med. Reord* reports a death supervening upon its external use in an ulcer. The cases teach us that boracic acid is not so harmless as is usually supposed, and warn us to be cautious in its use, either pure or in such combinations as borax, boro-glycerin.

Bad Effects from Vaseline.

AT a meeting of the Cincinnati Academy of Medicine, it was stated that the vaseline used at present is not the same preparation that was formerly employed. In several instances it has caused eczema in sensitive skins. A German pharmacist examined six different specimens recently and found that nearly all of them were acid; besides the free acids they contain some sulphuric and sulphurous acids.

NOTE.—There seems to be some mistake about this. Probably some of the numerous petroleum ointments, recently put on the market, were found to have this disagreeable property.—ED. A. D.



A NEW SIPHON.

FR. BODE and AL. WIMPF are the German patentees (No. 23,794) of an apparatus for siphoning liquids which is here illustrated.

The short leg of the siphon is surrounded by a cylinder the bottom of which has a hole closed by a valve. When the short limb is immersed in liquid, the cylinder is filled to the level of the surrounding fluid. Then, by blowing into either of the tubes E or F, the the other being closed meanwhile, the valve is closed and the liquid in the cylinder is driven into the siphon until sufficient has reached the long leg to start the automatic flow.

Abrotine.

THE common southern-wood (*Artemisia Abrotanum*) is reported by M. Craveri (*L'Union Pharm.*, xxiv., 410), to yield a crystallizable alkaloid, which he has named "abrotine." The sulphate, hydrochlorate and citrate have been prepared, all of which crystallize well, and the hydrochlorate is very soluble in water. Some preliminary physiological experiments with abrotine have been made by Dr. P. Giacova, who finds it to lower the temperature of the body, and to stop the action of a frog's heart in a few minutes. The alkaloid and its salts appear also to possess the property of preventing the putrefaction of albuminoid matter.—*Pharm. Jour. and Trans.*

Eucalyptus in Baldness.—A California physician was in the habit of pounding to a pulp the leaves of eucalyptus, which he applied to his head for the cure of headache, and was surprised to find a new and abundant crop of hair commence to grow.

Eau de Cologne.

	I. parts	II. parts
Oil of Orange Peel	150	13
" " Lemon	150	17
" " Bergamot	60	7
" " Neroli (bigarade)	5	—
" " Neroli (petale)	10	7
" " Rosemary	20	7
[Deodorized] Spirit	40,000	4000

Either of these formulæ may be used. Dissolve the oils of orange, lemon, and bergamot in 30,000 (I.) or 3,000 (II.) parts of pure wine-alcohol, and the oils (I.) or oil (II.) of neroli in 1,000 of finest, genuine grain alcohol. Set both solutions aside for a few days, in a shady place. Then mix them in a retort and distil. To the distillate add the oil of rosemary and let the product season as long as possible in a shady and cool place

The oils must be the very finest and perfectly fresh. The two kinds of alcohol should be selected with care [in this country it will be impracticable to use any but grain-alcohol], for upon them depends the secret of making a really good eau de Cologne, because each of them has its peculiar ethereal odor. [If these two different spirits cannot be obtained, then deodorized alcohol must be used, as we have already indicated in the formula. In fact, the experience of perfumers in this country is altogether on the side of *deodorized* alcohol, and opposed to any fusel odor.] The distillation should never be omitted as the product is thereby greatly improved. But, if it is inconvenient to do so, the next best thing to do is, to heat the whole mixture in a vessel closed with cotton, placed in hot water, for a few minutes to 60° C. (140° F.).

Another important factor to improve its flavor is to keep it for a long time before using it. To avoid this loss of time, it has been proposed to cause the liquid to flow from a reservoir or bottle through a spirally coiled, very narrow glass-tube exposed to the direct rays of the sun into a vessel placed below and to repeat this process a number of times. This is said to be most effective if done during the forenoon, while the rays of the sun are active without being too heating.

The product prepared after formula I. approaches that known in trade as "Springbrunn," having a specific odor of orange peel. That made after II. resembles the kind known as "Jülichsplatz 4" which has a characteristic odor of orange flowers. No. I. is enlivening, refreshing, and sweet in odor; No. II. more "sleepy," or, as it is termed, more "high-toned."—AD. VOMÁCKA in *Seifenfabrikant.*

[Note by ED. A. D.—Those who have occasion to use oil of orange peel for cologne or other flavoring, will do well to procure the oil of the Curaçao orange, which is the finest oil of orange known. It may be had from dealers in essential oils. Just now it can be had from Fritzsche and Co., New York.]

On the Pharmacopœial Rule of Preparing Diluted Alcohol from Alcohol of Any Higher Strength.

UNDER the heading of Alcohol Dilutum, the U. S. Pharmacopœia has the following passage:

"Diluted Alcohol of this strength [containing 45 per cent by weight of absolute alcohol] may be prepared from alcohol of any higher percentage by the following rule in which all terms denote weight: Divide the alcoholic percentage of the alcohol to be diluted by 45.5 and subtract 1 from the quotient. This gives the number of parts of water to be added to *one part* of the alcohol."

In commenting upon this, Dr. Adolph Tscheppe says: Many who are not familiar with mathematical expressions,

subtract the 1 from the last place of the decimals, instead of from the whole number in front of the decimal point. It would have been more intelligible if the quotient had been made to express the number of parts to which one part of the given alcohol should be diluted. Still more simple is a rule which requires no calculation at all and which, when once understood, can never be again forgotten, namely:

The dilution is to be made in inverse proportion to the respective percentages (of the given and the desired alcohols).

For instance, if an alcohol has been found, by means of the areometer, to contain 62 per cent of absolute alcohol, then 45.5 parts of this must be diluted to 62 parts in order to obtain an alcohol of 45.5 parts of absolute alcohol.

If a pound, or any other definite quantity, of such an alcohol is to be diluted in the same ratio, then the well-known rule of three (or proportion) will solve the problem:

$$45.5 : 62 = 16 \text{ oz.} : x.$$
$$x = 22.08 \text{ oz.}$$

That is, a pound (or 16 oz.) of a 62 per cent alcohol must be diluted with enough water to weigh 22.08 oz. in order to furnish officinal diluted alcohol of 45 per cent.

And if a definite weight is be to obtained, the proportion is simply inverted. Supposing the problem to be: It is required to prepare 80 ounces (by weight) of a 45.5 per cent alcohol (that is, diluted alcohol) from a 62 per cent alcohol. How much of the latter must be taken?

$$62 : 45.5 = 80 \text{ oz.} : x$$
$$x = 58 \text{ oz.}$$

That is, 58 oz. must be diluted with water to make 80 oz.—*Pharm. Rundschau* (Hoffmann's), 1883, 269.

On Testing for Arsenic, Particularly in Subnitrate of Bismuth.*

THE test for arsenic by evolving hydrogen gas from an alkaline solution (in presence of zinc and iron), has been repeatedly recommended, and has also yielded the best results in Prof. Reichardt's hands, so that it was finally adopted by the Pharmacopœia Commission. Soon after the publication of the Germ. Pharm., however, it was condemned by manufacturers, by Hager and others. Schlickum even states that he added quite considerable quantities of solution of arsenite of potassium to the subnitrate without finding it again by means of the test.

Prof. Reichardt had already drawn attention, in an article published in 1880 (*Arch. d. Pharm.*, 214, p. 1, sqq.), to the fact that arsenetted hydrogen effected the complete and immediate reduction of nitrate of silver only if the solution of the latter contained a considerable excess of nitric acid.

At first the Pharmacopœia Commission had worded the arsenic test so that the gas was to be conducted into such an acidulated solution; but, when the whole reaction was ordered to be performed in one test-tube and the gas to be made to strike against paper wetted with silver solution, it was overlooked that this solution must be *acid*.

The neutral concentrated solution of nitrate of silver has been condemned as being too delicate, since it is decomposed even by contact with the air. It was also supposed that the nitric acid of the subnitrate of silver could be reduced to ammonia (NH_3) and thus vitiate the test.

It is well known that hydrogen is capable of reducing a neutral solution of silver (sulphate, nitrate, or acetate of silver) according to Gmelin-Kraut.

The first series of experiments detailed by Prof. Reichardt concerned the

* Abstract from a paper by Prof. E. Reichardt on Subnitrate of Bismuth and its Examination, published in the *Arch. d. Pharm.*, August, 1883.

Behavior of Hydrogen towards Paper wet with Silver Solution.

Three different solutions were experimented with, viz.: 1, a solution of 1 in 2; 2, one containing 1 in 20; 3, another of 1 in 2, to which an equal volume of officinal nitric acid had been added.

On bringing hydrogen evolved from an alkaline solution *free from arsenic* in contact with the first solution, the latter became colored at once or after one miuute. In the case of the second this occurred after some time. In that of the third *no change* was observed even after several hours.

It is to be observed, that zinc alone added to solution of soda evolves almost no hydrogen at all; but it does so at once when in contact with iron. It is customary to select zinc filings and ironwire; or iron filings and fragments of zinc; but it is necessary that the metals shall be in contact in several places.

If the test-tube in which the reaction is made is covered with paper wet with silver solution, there is a risk of the silver being reduced on the outer surfaces by certain gases contained in the air. To avoid this error, Prof. Reichardt repeated the experiments so that the silver paper was held within the test-tube by notches in corks, with which the test-tube was loosely stoppered.

Even in this case the same results as above were obtained, except that it required a somewhat longer time to color the paper. The acidulated solution, however, remained uncolored even after twenty-four hours.

In another experiment, hydrogen gas was first passed through a strongly acidulated silver solution, which therefore, must retain sulphuretted, arsenetted, and antimonetted hydrogen. The washed gas was then made to pass through a tube containing successively paper-strips wet with the above three solutions. In this case the same result was again obtained.

From these experiments it results that neutral silver solutions are altogether unsuitable for this test.

The next question investigated by Prof. Reichardt was this, whether any of the nitric acid present during the reaction was reduced to ammonia. While a faint evolution of ammonia was obtained on pushing the reaction (particularly on the application of heat), this was nevertheless found to be so small as not to interfere with the silver solution, provided it was properly acidulated.

Next he studied the

Behavior of hydrogen evolved from an alkaline solution towards arsenious and arsenic acid.

[*Note.*—In order that the following may be properly understood, we quote here the arsenic test prescribed under *Bismuthum subnitricum* by the German Pharm., II.

"When heated with solution of soda in excess, it evolves no vapor of ammonia; if the filtrate [from the previous reaction] be warmed in a test-tube containing a few pieces of bright iron-wire and a little zinc filings, the escaping gas should not impart any color to paper wet with solution of silver (1 in 2) within one hour."

The United States Pharmacopœia directs to use aluminium wire, in place of iron and zinc. Aluminium has at least this advantage that it is probably never contaminated with arsenic, while this is frequently the case with zinc.—ED. A. D.]

One experiment was made in the following manner: To a flask in which the above described test was being performed, *one* drop of Fowler's solution (corresponding to about 0.0004 gm. of arsenious acid) was added. The paper which had been wetted with *acid* solution of silver, began to be discolored in a few moments, became distinctly so after two minutes, quite black after fifteen minutes, and an appreciable amount of arsenic separated in the alkaline liquid, in brownish-black flocculi, which rendered the whole liquid turbid.

Another experiment showed that a quantity as small as 0.0000032 gm. or one-twenty thousandth of a grain of arsenious acid still gave a visible reaction.

But Prof. Reichardt ascertained the important fact that *arsenic acid* (As_2O_5) *is not reduced to arsenious acid* (As_2O_3) in an alkaline solution.

In presence of arsenic acid, during the reaction, there is, therefore, no response whatever to the silver test; but the least trace of arsenious acid is immediately indicated.

Since iron, or zinc, or hydrogen in statu nascenti under ordinary circumstances, very rapidly reduce arsenic to arsenious acid, it was attempted to bring about this reduction more promptly in the alkaline liquid, by continued heating, boiling, and shaking, but only with limited success and not of sufficient decisiveness to serve as proof of the presence of arsenic.

All the preceding experiments were made in duplicate, both with neutral and with acid solution of silver. The presence of nitric acid never interfered.

(To be concluded.)

A Test for Tin.

THE reaction between stannous chloride and a solution of brucia in nitric acid is well known to chemists; but, as far as the writer is aware, it has hitherto been used only for the detection of brucia, and not as a test of tin. For the latter purpose, it possesses several advantages over the ordinary test with mercuric chloride. It is more delicate, more striking, more convenient, and may be applied under conditions where the latter test cannot.

Brucine Reagent.—To 1 decigramme of crystallized brucia add 1 *cc.* of pure nitric acid; when solution is complete, add 50 *cc.* of water, heat to boiling, and cool.

The heating is not necessary, but renders the reagent somewhat more sensitive. It is of a permanent orange amber color.

Use.—In the ordinary course of analysis, the sulphides of arsenic, antimony, and tin are obtained upon a filter, and are digested with ammonium carbonate for the removal of arsenic. The residue is dissolved in strong hydrochloric acid, the solution evaporated, diluted with water, and a strip of platinum and a strip of zinc placed in it, in contact, for several hours. Nascent hydrogen reduces antimony chloride to metal, which is deposited upon the platinum; and stannic chloride to stannous chloride, which remains in solution. Now, if to a few drops of the brucine reagent, in a white dish, a drop of the solution containing stannous chloride be added, a distinct purple color is produced.

Interference.—Neither zinc chloride nor nascent hydrogen produces any effect upon the reagent. Organic matter does not interfere. Ammonium sulphide and sodium hyposulphite act like stannous chloride.

Delicacy and Limits.—By using a solution of stannous chloride repeatedly diluted, it was found that a drop containing only 0.0000025 gramme, gave a distinct color after about one minute. A drop cantaining 0.000002 gramme gave a barely perceptible cloudiness with mercuric chloride. If the reagent be too dilute, the color is pale and the reaction indistinct. If excess of brucia be used, no purple color is produced, but a dirty green, or a decoloration resembling the morphia reaction.—CHARLES R. DREYER, in *Chem. News*, Nov. 30th, 1883.

The New Time System.

THE movement for a uniform standard of time embodied in the plan of the railway companies, which lately went into effect, has been given national countenance and importance by the action of the authorities at Washington, and it is only a question of a short time when it will spread to the whole country, if not to the whole continent. It has been discussed in many of the sessions of the several international scientific congresses which have met in Europe within the past two or three years, and at no distant day will prevail throughout the civilized world. In Washington the economic merits of the system have been so readily seen that, by direction of the Secretary of the Interior, the new standard will be substituted for the local time of the national capital, and, as the Secretary of the Interior is the official who controls the Land Office and the great Western reservations, his action means the adoption of standard time in the regulation of the clocks and business of that department all over the United States. The facilities of the Washington Observatory will be employed in determining the exact time for the longitudes of the eastern and central divisions of the United States, while that for the Rocky Mountain district and the Pacific slopes will probably be furnished from the local station at Pike's Peak.

The hearty encouragement given the new standard generally in the short time which has elapsed since the railroad convention at Chicago promulgated the scheme leaves little doubt that the uniform standard will come into vogue through the force of its own advantages. The confusion of time standards in a nation with so broad a domain eastwardly and westwardly as ours, and with so intimate commercial and industrial interests as exist longitudinally in the United States, had been the source of unceasing annoyance and trouble. The remedy occurred to the scientific mind of Professor Cleveland Abbe, of the Signal Bureau at Washington, and his plans were elaborated by Dr. F. A. P. Barhard, of Columbia College, who, as a delegate to the International Congress at Liverpool last year, laid the foundation for the eventual extension of the system to Europe and the East.

An inspection of the atlas of the Western Hemisphere shows that all the land composing the continent of North America is contained substantially between the 50th and 130th degrees of west longitude. Professor Abbe started with the meridian of 60 degrees west from Greenwich—or the four-hour meridian—and proposed that it should give the time to Newfoundland, Nova Scotia, New Brunswick and all the maritime provinces of Canada. His next meridian, the one 75 degrees west of and five hours later than Greenwich, was to dominate New England and the Middle States and Quebec and Ontario in Canada. The third was the meridian of 90 degrees, the six-hour meridian, being the longitude of New Orleans, and was to fix the time for the Missippi Valley. The fourth that of Denver and Pike's Peak—namely, 105 degrees, seven hours later than Greenwich—was to govern the time of the Rocky Mountain Section, and the fifth that of Santa Barbara, California —120 degrees—the eight-hour meridian was to be the standard of the Pacific slope. To these he gave respectively the designations—Eastern time, Atlantic time, Valley time, Mountain Time, and Pacific time.

A clear conception of the working of the new plan may be obtained by taking an ordinary globe representing the earth and dividing the same into twenty-four sections by dark lines, being drawn from pole to pole. These sections will represent the twenty-four sections into which the surface of the earth is supposed to be divided to secure the basis of the system of standard time—the standard in each section being an even hour prevailing as the time all over the area of the section. In this circuit of the globe the twenty-four sections will thus occupy successively each and all of the twenty-four hours of the day. If next, midway between the lines of the sections of the globe, twenty-four lines are drawn from pole to pole, one of these lines coincides with the longitude of Greenwich. Then the twenty-four heavy lines, which in the revolution of the earth are just an hour apart in coming vertically beneath the sun, will represent the twenty-four arbitrary meridians, each of which, starting at Greenwich, is to give the time to the country half way each side of it, or, in the case of the globe, to the space between the light lines.

Nothing could be simpler than the plan as adopted. It divides our continent into four breadths or belts of fifteen degrees each (the equivalent of an exact hour in time). Each belt has its separate and uniform standard of time, to which every place within its limits should conform. At each boundary there is an arbitrary change of one hour, and the time of the traveler's watch being set accordingly, holds good till he reaches the boundary of the next belt. If he does not wish to disturb the hands of his watch he mentally adds or subtracts one hour for each belt, as he journeys east or west.

The valuable features of the new plan may be summed up as follows; No standard clock will be more than half an hour slower or faster than the local time anywhere, even at the halfway lines between the time meridians —the heavy lines of the globe—and while the hour hands would differ by intervals of unity from section to section, the minute and second hands would point identically to the same figures on every clock over the whole face of the earth. For instance, when

LONGITUDE WEST FROM GREENWICH.

10 A.M.	11 A.M.	12 Noon.	1 P.M.	2 P.M.
PACIFIC DIVISION.	MOUNTAIN DIVISION.	CENTRAL DIVISION.	EASTERN DIVISION.	INTERCOLONIAL DIVISION.
120°	105°	90°	75°	60°

Pacific Ocean.	Victoria, V.I.	Walla Walla, W. T.	Fort Benton, Mont.	Bismark, Dak.	Pembina, Dak.	S. St. Marie, Mich.	Ottawa City, Can.	Quebec, Can.	Frederick'on, N. B.	Atlantic Ocean.
	Olympia, W. T.	Boisee City, Idaho.	Helena, Mont.	Ft. Kearney, Neb.	Yancton, Dak.	Saginaw, Mich.	Toronto, Can.	Montreal, Can.	St. John, N. B.	
	Astoria, Or.	Lewiston, Idaho.	Cheyenne City, Wy.	Ft. Laramie, Wy.	St. Paul, Minn.	Lansing, Mich.	Oswego, N.Y.	St. Albans, Vt.	Halifax, N.S.	
	Salem, Or.	VirginiaCity, Nev.	Salt Lake City, Utah.	Denver, Col.	Winona, Minn.	Detroit, Mich.	Rochester, N. Y.	Eastport, Me.	Yarmouth, N. S.	
	San Francisco, Cal.	Cedar City, Utah.	Ogden City, Utah.	Colorado City, Col.	La Crosse, Wis.	Gr. Rapids, Mich.	Syracuse, N. Y.	Montpelier, Vt.		
	Sacramento, Cal.	San Diego, Cal.	Provost City, Utah.	Ft. Atkinson, Kan.	Pairie du Chien, Wis.	Ann Arbor, Mich.	Buffalo, N.Y.	Bangor, Me.		
	Marysville, Cal.	San Pedro, Cal.	Prescot City, Ariz.	Austin, Tex.	Omaha, Neb.	Madison, Wis	Harrisburg, Pa.	Augusta, Me.		
	Montery, Cal.	San Bernardina, Cal.	Santa Fé, N. M.	Corpus Cristi, Tex.	Nebraska City, Neb.	Chicago, Ill.	Pittsburgh, Pa.	Belfast, Me.		
	Carson City, Nev.	Fort Yuma, Ariz	Albuquerq'e, N. M.	Brownsville, Tex.	Des Moines, Iowa.	Springfield, Ill.	Cleveland, O.	Portland, Me.		
	Stockton, Cal.		Chihuahua, Mex.	Matamoras, Mex.	Dubuque, Ia.	Ft. Wayne, Ind.	Zanesville, O.	Concord, N. H.		
	S. Barbara, Cal.			Monterey, Mex.	Davenport, Iowa.	Indianapolis, Ind.	Wilmington, Del.	Albany, N.Y.		
					Iowa City, Ia.	Terre Haute, Ind.	Dover, Del.	Boston, Mass.		
					Burlington, Ia.	New Albany, Ind.	Baltimore, Md.	Hartford, Conn.		
					Rock Island, Ill.	Toledo, Ohio.	Annapolis, Md.	New Haven, Conn.		
					Quincy, Ill.	Columbus, O.	Washington, D. C.	Providence, R. I.		
					Topeka, Kan.	Cincinnati, O.	Wheeling, W. Va.	New York, N. Y.		
					Leavenw'th, Kan.	Frankfort, Ky.	Richmond, Va.	Newark, N.J.		
					Jefferson City, Mo.	Louisville, Ky.	Raleigh, N.C.	Trenton, N.J.		
					St. Louis, Mo.	Lexington, Ky.	Newburn, N. C.	Philadelphia, Pa.		
					Hannibal, Mo	Nashville, Tenn.	Wilmington, N. C.	Cape May, N. J.		
					Ft. Gibson, Ind. T.	Memphis, Tenn.	Columbia, S. C.			
					Little Rock, Ark.	Knoxville, Tenn.	Charleston, S. C.			
					Helena, Ark.	Milledgeville, Ga.	Beaufort, S. C.			
					Jackson, Miss.	Atlanta, Ga.	Augusta, Ga.			
					Vicksburg, Miss.	Macon, Ga.	Savannah, Ga.			
					Natchez, Miss.	Americus, Ga.	Fernandina, Fla.			
					Baton Rouge, La.	Tallahassee, Fla.	Jacksonville, Fla.			
					New Orleans, La.	Montgomery, Ala.	Key West, Fla.			
					Shreveport, La.	Mobile, Ala.				
					Dallas, Tex.	Marion, Miss.				
					Huntsville, Tex.					
					Houston, Tex.					

it was fifteen minutes and fifteen seconds past twelve o'clock at Greenwich it would be exactly fifteen and a quarter minutes past some hour of the clock on every other timepiece all over the globe. This scheme has received the emphatic approval of a number of scientific associations, among them the American Meteorological Society, the American Geographical Society, the Canadian Institute, the International Geographical Congress at Venice and the Imperial Academy of Sciences at St. Petersburg.

The objections raised in Boston have been overcome by arguments showing that the usual clock-time in any place is not, in fact, an exact record of the sun's daily journey.

Among the places where the clocks will be exactly right by the new standard are Ottawa, Canada; Pottsdam, Cooperstown, and Herkimer, in New York, and Vineland in New Jersey. Not taking seconds into account, the following table shows the differences of time in the Eastern District between the local times, which are the present standards for the running of trains on one or more roads, as compared with 75th meridian (the new) time:

Minutes faster.	Minutes slower.
Albany, N. Y.....5	Baltimore, Md....6
Bath, Me.....20	Charleston, S. C.15
Boston, Mass....16	Detroit, Mich 32
Montreal.....6	Hamilton, Ont ..19
New London, Ct..12	Philadelphia.....1
New York City....4	Port Hope, Can..14
Portland, Me. ...19	Port Huron, Mich30
Providence, R. I..14	Richmond, Va...10
	Savannah, Ga....24
	Toronto, Can....17
	Washington, D.C.8

Above we give a plan, showing the new time sections east and west of the ninetieth degree from Greenwich, which includes all the territory of the United States. The heavy lines show the centres of the sections and the light lines the limit east and west (7½ degrees) which is included in each section. Within each section we have printed the names of some of the principal cities to give a clear idea of the territory, and more especially the cities, which are included in each section.—*Oil, Paint, and Drug Reporter.*

Window Dressing.

DRUGGISTS dress their shop windows, in order that the public may be attracted by the display and induced to patronize the establishment. Window dressing consists of a more or less artistically arranged show of goods, and while it frequently evinces great taste, it is not unfrequently carried out in such a manner as to be extremely suggestive to the passer-by. Probably no two druggists' ideas will exactly coincide as to how a window ought to be dressed; but there are one or two principles which should be kept sight of in this particular branch of business. A window should be so dressed that it will not disgust and repel the public. The last is easily accomplished, and we often see it done by exposing, for example, open tins of glycerin jujubes or delectables in the windows, the lozenges covered with dust and dead flies. Not only are the public disgusted with this, but they have ground for very serious complaint. No man has a right to "dress" his window in such a manner that any passer-by will, for months after, be seized with nausea every time he thinks of curing his sore throat by means of a glycerin pastille.

Window dressing should not be made the means of spoiling valuable drugs, which is often done, for example, by placing half a dozen clear-glass wine-testers, purporting to contain the finest cod-liver oil, in the direct and unmitigated rays of the summer sun. As a general rule, liquids intended for internal use should never be placed in the window unless well-wrapped up in paper, and even then the heat will be apt to do them harm.

Window dressing ought not to be selected as the medium for displaying the ignorance of the druggist. If this is desired, however, it may be accomplished by crowding perishable drugs into the place where they are most likely to be damaged. For example, we remember one instance where a bell of camphor was a favorable article, and while it was, no doubt, very interesting to the outsider, it did not say much for the wisdom of the owner of the shop.

A window should be dressed neatly. In the eyes of the public, a druggist does not know his business if he cannot do up a parcel neatly; and if the window be clumsy or untidy, it is quite a natural inference that the dresser is clumsy and untidy also. Consequently, that particular shop gets the cold shoulder. In order to dress neatly, too many articles should be avoided, while there should be enough to make a somewhat symmetrical arrangement. Some druggists have absolutely nothing in their windows, save the orthodox specie-jar and carboys, while others huddle together every conceivable article, regardless, alike, of congruity of association and tasteful arrangement. There is, however, a happy medium which might be employed with more advantage.

Some druggists object to window dressing, the spoiled goods, in their opinion, more than counterbalancing the value of the advertisement. As to that, there are many articles that can be shown without risk, and it is, moreover, perfectly legitimate to do up a set of "dummies" for the window. Others, again, think that window dressing is not worth the trouble involved, as the public do not concern themselves with the boxes, bottles, trusses, and sponges; but still they continue the practice, simply because others do. To all of these we would suggest a plan that we have seen carried out with success. Procure from a cabinet-maker a number of cases—as many as will conviently occupy the available window space—about three inches deep, with glazed lids, and let these be divided into a series of compartments, say three by four inches. Fill the compartments with choice specimens of drugs, one case containing roots, another barks, another leaves, another seeds and fruits, another inorganic chemicals, and so on. These may be placed in the window without labels, in which case they will be an unfailing source of speculation to the passer-by; or they may be labelled, when they will be as eagerly, and much more intelligently scrutinized.

* * *

The advantage in this style of window dressing is that it supplies interesting material for the public eye; it involves no trouble after the cases are once filled; there can be no risk of spoiling valuable goods, and the cases always look clean and neat.—*Chem. and Drug. Diary.*

Soap Varnish.

THIS varnish, owing to its cheapness, complete resistance to water, and considerable elasticity, is of value for many purposes. To make it, boil good tallow soap with soft water until dissolved, and filter while hot through cloths; heat again, add an equal volume of water and a boiling solution of alum, as long as any alumina salt is precipitated. Let the stearate of aluminium settle, and wash the precipitate thoroughly, then dry and heat on a water-bath until transparent. Finally, stir the preparation into turpentine, heated nearly to boiling until a solution is made of the consistence of thick varnish, which can afterwards be thinned with more turpentine if required. Johnson's water-proof varnish for paper and cloth is made by dissolving sulphate of iron in water, adding soap solution thereto and straining off the precipitated stearate of iron. If this be dissolved in bisulphide of carbon or benzole, a water-proof varnish is obtained. For a white varnish use alum instead of sulphate of iron. Varnish for gilding is made as follows: Fifty parts of soda are dissolved in 100 parts of water in a copper vessel heated to boiling, and 100 parts of powdered resin stirred in and boiled for two or three hours until perfectly clear. Let it cool, pour off the supernatant water from the heavy, viscous, resin soap, add 100 parts of fresh water and 15 parts of steeped glue, and heat until the whole is dissolved. This makes a quick drying varnish; for a slow-drying varnish add 10 to 20 parts of glycerin. The above resin soap, mixed with about five per cent of ammonia, forms a very cheap and durable vehicle for paints. Water-glass paints are only successful when mixed in small quantities with the varnish and applied immediately.—E. ANDRES, *Pharm. Journ.*, September 1st.

Mouth-Washes.

THE following formulæ are published by Ad. Vomácka in the "*Seifenfabrikant:*"

Guaiacum Wood.....	30 parts.
Valerian Root.....	30 "
Staranise.....	40 "
Cloves.....	20 "
Cochineal.....	10 "
Borax.....	3 "
Cognac.....1500	"
Oil of Cloves.....	2.5 "
Oil of Sassafras.....	2.5 "
Oil of Neroli	1 "
Oil of Peppermint.....	4.5 "
Vanilla.....	10 "
Rose-Water.....300	"
Glycerin.....100	"

Digest the guaiacum wood, valerian, cloves, and staranise in 1,000 parts, and the ethereal oils and finely-cut vanilla in 500 parts of the Cognac during fourteen days. Then express and mix. Having digested the cochineal in the rose-water and glycerin in which the borax had previously been dissolved, add this mixture to the former. Let the whole stand for some time in a cool place, then filter through a double filter.

This is a most superior mouth-wash, though rather more expensive than the following ones:

Eau dentifrice (Dr. Pierre, Paris).

Tincture of Cedar Wood.....300	parts.
Oil of Peppermint ...	1 part
Oil of Anise.....	1 "

Tincture of cedar wood is prepared by digesting one part of the chips of cedar wood (obtainable in lead pencil and other factories) with five parts of cognac.

Salicylic Acid Mouth-Wash (Kolbe)

Salicylic Acid.....180	grains.
Distilled Water....	2 fl. oz.
Cognac.....	10 "
Oil of Wintergreen.	10 drops.
Spirit of Neroli.....	20 "

Eau de Botot.

Tincture of Cedar Wood.....400	parts.
Tincture of Rhatany.100	"
Oil of Peppermint...	3 "
Oil of Lavender.....	1.5 "
Oil of Staranise.....	2 "

Tincture of rhatany is prepared like the officinal tincture of krameria, only that cognac is substituted for diluted alcohol.

In all of the above preparations diluted alcohol may be used in place of cognac, but the products are not so fine as when the latter is used.

BIBLIOGRAPHY.

PHARMAKOGNOSIE DES PFLANZENREICHES. Von F. A. FLUECKIGER, Zweite Auflage. Dritte Lieferung. 8vo. Berlin: R. Gaertner'sche Verlagsbuchhandlung (Hermann Heyfelder). Pp. 601–1049.

IT will be welcome news to many of our readers to learn that the new edition of Flückiger's Pharmakognosie, of which the first part appeared in 1881 (see NEW REM., 1881, 185), the second in 1882 (see N. R., 1882, 317), is at last completed. The author has worked most indefatigably to push the work to rapid completion and has succeeded in accomplishing this even earlier than we expected. Our previous two notices gave an outline of the systematic arrangement followed in the work. The present number contains the following chapters and divisions (continued from N. R., 1882, 317):

B. Leaves (and, in part), Flowering Plants

1, of faint odor and taste; 2, of prominently astringent taste; 3, leaves and herbs of bitter taste; 4, leaves and herbs of saline bitter, scratching and sharp taste; 5, leaves and herbs of aromatic taste; *a*, from Labiatæ; *b*, from other families, containing ethereal oil.

C. Flowers, Inflorescences, Flower Parts.

1. Parts of Flowers; 2. Complete Flowers and Inflorescences.

IV. Fruits.

A. Fruit-rinds and Pulps.

B. Fruits and Fruit-groups. 1, of oily or sweet taste; 2, of bitter taste; 3, of sharp taste; 4, chiefly aromatic fruits and fruit-groups.

V. Seeds.

A. without bitter taste; oily or mucilaginous.

B. of bitter taste.

C. of sharp or aromatic taste.

D. Seed-appendages.

We have already mentioned that the work may be regarded as a new and revised German edition of the Pharmacographia, inasmuch as the larger part of the contents of the latter has been incorporated—though not verbally—into the "Pharmakognosie." A considerable number of drugs treated of in the Pharmacographia have been omitted, because they are little or not at all known and used in Germany. On the other hand, the present work contains chapters on the following drugs not treated (or perhaps but incidentally mentioned) in the Pharmacographia.

Amylum; Stipites Laminariæ; Fungus Laricis; Fungus igniarius; Rhiz. Zedoariæ; Rad. Ononidis, Turpethi, Angelicæ, Levistici, Pimpinellæ; Cort. Frangulæ, Condurango; Herba Jaceæ; Fol. Malvæ, Althææ, Farfaræ, Trifolii, Theæ, Maté, Juglandis, Menthæ crispæ, Melissæ, Salviæ, Lauri, Aurantii; Herba Centaurii, Cardui ben., Absinthii, Millefolii, Serpylli, Marrubii, Cochleariæ, Meliloti; Flores Tiliæ, Malvæ arb. et silv., Chrysanthemi, Millefolii; Fruct. Rubi idæi, Sambuci, Papaveris, Lauri, Petroselini, Phellandrii, Siliqua dulcis; Guarana; Semen Papaveris, Cacao; Kola.

The authoritative value generally conceded to the first edition already, and applying in a still higher degree to the present, will relieve us from the task of attempting a critical review of the work. We can only say that we have read large portions of it with attention and care, and have found the information complete and brought down to the latest period. The most minute care has evidently been bestowed upon the history of the drugs and upon the pharmacognostic descriptions; and here we may record our wish that a subsequent edition of the work may be embellished with suitable illustrations, made for the purpose, to show the peculiar characters or appearances upon which the pharmacognostic distinctions are based, both of the drug as it usually appears, as well as in microscopic sections, drawn to a definite scale, wherever possible. This will be a considerable labor; but as not every one is in possession of works of reference containing such diagrams, it would, in our opinion, be a most meritorious undertaking to join this feature with a subsequent edition.

A very useful portion of the work is the appendix in which the older writers, from whose works much of the history of drugs is to be gleaned, are enumerated with biographical and bibliographical notices.

WIESEN AS A HEALTH RESORT IN EARLY PHTHISIS. With Directions for Clothing, Diet, and Exercise in the Swiss Alps during Winter. By A. T. TUCKER WISE, M.D., etc. London: Bailliere, Tindall & Cox, 1833, pp. 68. Sm. 8vo.

THIS contains chapters relating to the Sensation of Cold, Physiological Action of Atmospheric Conditions, Vascularity of the Lungs in Cold Climates, Evaporation of Secretions, Site and Elevation of Wiesen, Its Neighborhood, Climate, Water-Supply and Soil, Winter Clothing, Diet in the Swiss Alps during Winter, Exercise, Sleep, Meals, etc., The Drawbacks of High-Altitude Stations, Weather Journal, and Brief Notes of Comparison with St. Moritz, Dovoz, and Andermat Meteorological Observations.

The book has, as frontispiece, an outline map of Southern Europe, showing the location of Wiesen, and its relations by rail and otherwise to other places, and also, as an appendix, a number of tables showing the meteorological variations during 1882 and '83.

As may be inferred from the synopsis of its contents given above, the book will serve as a guide and handbook for those who desire information about this part of Switzerland, and may also, by its information, help to decide the propriety of resorting to it in any particular case.

REPORT OF THE COMMISIONER OF EDUCATION FOR THE YEAR 1881. Washington, 1883. Pp. 840; 8vo.

IT is to be regretted that the publication of these government reports involves so much labor that they fail somewhat to excite the interest which would otherwise be felt in them. It has always seemed to us that a division of the matter into parts, each embracing special branches, would enable some to be issued with less delay and, at the same time, this would enable the commissioner to include a summary of the progress in each special branch in such form as would attract the attention of those who are especially interested. A review of the progress in pharmaceutical or medical education, for example, loses much of its value when it appears two years later than the period embraced. Even with the present mode of publication we fail to find any reference to several matters which have a great deal to do with education in these special branches, and which we might well expect to find some mention of in a government report of such pretensions. For example, no reference is made to the Association of American Medical Colleges and its efforts to elevate the standard of medical education and secure uniformity in requirements. No attention is paid to the various State laws regulating medical education. There is no, or at most but a partial attempt to enumerate the various medical and pharmaceutical associations whose purpose is to advance the knowledge of medicine.

The existence of the American Pharmaceutical Association—one of the most powerful educational agents in the profession, is not even hinted at.

INDEX TO THE TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION. Vols. I.–XXXIII. Prepared by WILLIAM B. ATKINSON, M.D., Permanent Secretary. Philadelphia: 1883. Pp. 130, 8vo.

THE association has lately adopted the custom of publishing its transactions in the form of a weekly journal, and has ceased, therefore, to issue an annual volume. The Secretary, quite properly, considers this a fitting opportunity for issuing a complete index to the contents of the volumes already published and has, so far as we can judge, done the work with good judgment and care. We are not informed of the price of the book, but it cannot be so great as to prevent every physician who has occasion to become familiar with the writings of his brethren in this country from possessing it. Its existence will certainly lead to the preservation of complete sets of the annual volumes and to more frequent reference to them.

THE CHEMISTS' AND DUGGISTS' DIARY. 1884. Sixteenth Year of Issue. London: Published for the Proprietors at the Office of *The Chemist and Druggist*, 42 Cannon st., E. C.

THIS diary is always welcome, owing to the practical nature of the information contained in its prefatory pages and the convenience of its pages for memoranda. This year, its leading feature consists in the great variety of formulas and practical notes for the use of druggists, many of which have already appeared, however, in this journal.

THE MEDICAL RECORD VISITING LIST OR PHYSICIAN'S DAIRY, for 1884. New York: William Wood & Co.

OF all the pocket-books of this character there are none that approach in elegance or completeness to this. It is handsomely bound in soft seal-skin covers, gilded on its edges, and provided with a pocket and pencil, and is arranged for any probable number of patients. In contains several pages of information such as may be needed in emergencies, and altogether is just the thing for a physician's pocket or office table.

JAHRESBERICHT DER GESELLSCHAFT für Natur und Heilkunde in Dresden. Sitzungsperiode, 1882–83. 8vo. Dresden, 1883.

FIRST ANNUAL ANNOUNCEMENT of the Department of Pharmacy of the University of Wisconsin. Session of 1883–84. 8vo. Madison, 1882.

PREIS LISTE VOM MONAT SEPTEMBER, 1883, über Drogerie Waaren, chemische und pharmaceutische Präparate eigener Fabrikation, und Farben, von Gehe & Co., Dresden.

THE following reports of the proceedings of State Pharmaceutical Associations have come to hand:

INDIANA (May 22d, 23d, and 24th, 1883), pp. 164, 8vo. This contains, as well, the constitution and by-laws, and the roll of members.

NEW JERSEY (May 16th and 17th, 1883), pp. 88, 8vo. A beautiful phototype portrait of the late James Stratton, of Bordentown, is a frontispiece.

OHIO (May 16th and 17th, 1883), pp. 109, 8vo. A very creditable report.

LOUISIANA (April 2d, 3d, and 4th, 1883), pp. 73, 8vo. This is the report of the first meeting, and shows that the pharmacists of this State will soon have an association of the first rank in character.

All of the above reports contain valuable contributions to pharmaceutical science, most of which have already appeared in the pages of NEW REMEDIES.

CIRCULAR OF THE UNIVERSITY OF MICHIGAN. For 1882–83. Ann Arbor, 1883.

QUERIES & ANSWERS.

Queries for which answers are desired, must be received by the 5th of the month, and must in every case be accompanied by the name and address of the writer. Unless special instructions to the contrary accompany the query, the initials of the correspondent will be quoted at the head of each answer.

When asking for information respecting an unusual or proprietary compound, always accompany the query with all the information you may possess respecting it, and, when it can conveniently be done, send a specimen of the label.

Elder Berries.—Dr. Laurence Johnson, of New York City, writes, in answer to query 1,216:

In Oswego, Northern Cayuga, and Wayne Counties, New York, the elder berry grows in large quantities along the fences of neglected farms. Like some rare virtues, the elder berry flourishes best in the midst of poverty and neglect. In Oswego and Northern Cayuga a great deal of the land is poor, farming far from lucrative, and consequently the proper conditions for elder-berry growth are present to a rather remarkable extent. In certain parts of Wayne also the same rule obtains, and the plant is abundant. Years ago they were gathered in large quantities for the manufacture of a vile compound denominated "elder-berry wine"; and they were also dried and sold or bartered at the village stores. Why the demand for them has entirely ceased I do not know, for when properly treated they furnish an excellent article of food. Skilful housewives used to make them up into excellent tarts and pies.

No doubt they would again become an article of barter in the region named if proper inducements were offered through the local store keepers for their collection and preservation.

Dr. Orser, of Sanbury, Northumberland Co., Pa., also writes that:

"Elder berries can be found along the north shore of Lake Ontario, in Canada, in abundance. Many times have I gathered them in different localities. Should any person desire more definite knowledge of localities, I will be pleased to answer any correspondence relative to the same."

Geo. F. Hager, 90 South Market St., Nashville, Tenn., says, in response to the same query:

"The bush grows throughout the middle section of this State and northern Kentucky, in large quantities, along the fence-corners. A wagon-load can often be gathered on a single farm. As yet they have never been put to any use in this country, save to make ink."

Practical Formulas.

We are indebted for the following to Mr. J. F. Leary, of Rock Hill, Md.:

For Sore Nipples.

Castor oil	2 ounces.
Laudanum	5 drops.

Mix.

Apply to the nipples twice daily or after each nursing. "This remedy I have tried myself for my wife, when all other remedies had failed, and the nipples were deeply gashed."

For Unbroken Chilblains.

Tincture of Iodine	2 parts.
Camphor	1 part.

Mix.

Apply with a feather night and morning.

"I have had people come from all parts of my district for this chilblain remedy, and I have never known it to fail. When suffering myself last winter from frosted feet, this was the only thing that gave me relief."

White's Cough Syrup.

Syr. Tolutani	℥ij.
Glycerini	iv.
Syr. Scillæ Comp	vi.
Syr. Ipecacuanhæ	vi.
Tr. Lobelia	vi.
Tr. Opii Camph	vi.
Ext. Pilocarpi Fl	℥ij.
Ammonii Chloridi	℥i.

M. Sig. Dose, ℥i. every hour or two before bedtime, and three times a day through the day-time.

I inclose formula of cough syrup, which is one of the very best in use. I formulated it myself from the best authorities, and after two years' experience I find it to give the very best results obtainable from any cough syrup I have in the store, especially for recent coughs and colds. If you deem it worthy, you are at liberty to publish it for the use of druggists.

D. S. White,
Druggist.

Flandreau, D. T., December 17th, 1883.

No. 1,217.—**Wood-Wool** (D. S. M.).

This new material for dressings was first introduced into surgical practice by Dr. Walcher, assistant to the late Prof. Bruns, of Tübingen. It can be furnished in this country by manufacturers of paper-pulp (wood-pulp). Most probably, the well-known United States Senator from New York, Mr. Warner Miller, will be able to supply the demand.

No. 1,218.—**Bromide of Arsenic Solution (Clemens' Solution)** (W. W.).

As a supplement to the formulæ for the preparation of this solution which we gave on page 372 of our last volume, we place here another (from the *Moniteur de Pharmacie*), in which metallic arsenic and bromine are first made to combine:

Arsenic, in powder	72 parts.
Bromine	240 "

Pour the bromine into a long test-tube cooled off with ice-water; add the powdered arsenic in small portions at a time, gently agitating after each addition, and cooling the mixture carefully before adding a new portion. When the whole of the arsenic has been added, the test-tube is closed with a cork, removed from the ice-water, and occasionally agitated during six hours. The liquid is then decanted into a glass-stoppered bottle. The tribromide of arsenic thus produced is a dense liquid of an orange color, slightly volatile at the ordinary temperature, and completely volatilizable by heat with the evolution of pungent yellow vapors.

To prepare the solution of bromide of arsenic, the following proportions are usually employed:

Bromide of Arsenic	13 parts.
Distilled Water	620 "

Mix and dissolve.

It should be understood, however, that bromide of arsenic is insoluble, *as such*, in water. It decomposes in contact with the latter, and forms hydrobromic and arsenious acids:

$$\underset{\text{arsenic tribromide}}{2AsBr_3} + \underset{\text{water}}{3H_2O} = 6HBr + As_2O_3$$

6HBr: hydrobromic acid; As_2O_3: arsenious acid,

which dissolve in the water.

As the original bromide generally contains a little free bromine, the latter remains in solution after the compound has been decomposed by water.

The solution prepared by the above formula, assuming that *all* the bromine has been utilized in producing the tribromide of arsenic and that no excess of arsenic be present, would contain about 1.61 per cent of hydrobromic and 0.65 per cent of arsenious acids.

An apparently pure tribromide of arsenic, at least much purer than that obtained by the preceding formula, may be prepared by Nickles' process (as confirmed by Slocum in *Am. J. Ph.*, 1883, May), mentioned in New Rem., 1883, p. 209.

No. 1,219.—**Bottle-Glue or Sealing Material** (J. P.)

A useful bottle-glue, which is insoluble in water and particularly suitable for sealing bottles containing volatile liquids, such as chloroform, ether, alcohol, etc., may be prepared by soaking glue or gelatin in water, dissolving it in glycerin, then adding tannin (about two ounces for every pound of glue) and heating the mixture on a water-bath until perfectly homogeneous, and as free from excess of water as possible. It may be colored, if desired. When wanted for use, it is melted and applied to the mouth of the bottles.

No. 1,220.—**Brownish-black Hair Dye** (K.).

A very good brownish-black or dark-brown hair-dye may be prepared from the fresh green shells of chestnuts, walnuts or butter-nuts, by boiling the shells with water, concentrating the liquid to an extract, and dissolving the latter in four parts of diluted alcohol. Before applying this preparation to the hair, the latter must be deprived of fat by means of ammonia, borax, or the carbonate of an alkali.

No. 1,221.—**Prescription Manual** (R. H. C., Galt, Mo.)

The following can be well recommended: "A Manual of Prescription Writing," by Matthew D. Mann, A.M., M.D., etc. New York: G. P. Putnam's Sons, $0.75. "Prescription Writing, Designed for the Use of Medical Students who have never studied Latin," by Frederic Henry Gerrish, M.D., etc. Portland, Me.: Loring, Short and Harmon, $0.50; and "Lessons on Prescriptions and the Art of Prescribing," by W. Handsel Griffiths, Ph.D., L.R.C.P.E., etc. London: Macmillan & Co., $1.25.

No. 1,222.—**Syrup of Hypophosphite of Iron** (R. G. W.).

A permanent syrup of hypophosphite of iron—and of other hypophosphites—may be made by the method recommended by Prof. C. L. Diehl, published in New Rem., 1882, 267.

The process for making the above comprises two steps; *first*, the preparation of a freshly-precipitated magma of ferric hypophosphite; *second*, the solution of the latter and conversion into a syrup.

1. Preparation of ferric hypophosphite:

Dissolve 150 grains of hypophosphite of calcium in 4 fl. oz. of distilled water, if necessary by the aid of a *gentle* heat, and filter the solution. To the cold solution add, carefully, solution of ferric chloride (liquor ferri chloridi), as long as a precipitate is formed. Collect this on a close muslin cloth, drain well, and express firmly; then pour upon the magma 1 fl. oz. of distilled water, and express again.

2. Syrup of ferric hypophosphite:

Dissolve the magma obtained in the foregoing process, which contains, theoretically, 128 grains of dry ferric hypophosphite, in 1 fl. oz. of orange-flower water, with the acid of 128 grains of citrate of potassium; then add enough distilled water to make the solution measure 9 fl. oz. In this dissolve 13 fl. oz. of sugar, and filter the resulting syrup. 1 fl. drachm contains 1 grain of ferric hypophosphite.

No. 1,223.—**Prescription Difficulty** (D. W. S.).

This correspondent says: "I have to mix tincture of cannabis indica and bromide of sodium, very frequently, and have great trouble in having the cannabis precipitate. I make a solution of bromide of sodium in glycerin and water, and then add of a mixture of 1 part of tincture of cannabis and 2 parts of glycerin. But, after standing a short time, the cannabis is al-

ways thrown down. How can I combine the two, without having the trouble referred to?

Tincture of cannabis indica contains a large amount of resin which is insoluble in aqueous liquids, and requires strong alcohol for solution. As bromide of sodium is not very soluble in alcohol (it requires 13 parts), no clear alcoholic mixture of the two substances can be prepared; and even if this could be done, the alcohol would probably be therapeutically contra-indicated in cases where these drugs are given. There remains, therefore, nothing else than to endeavor to keep the precipitate *in suspension*. The best way, probably, is to use a little tincture of soap-bark, but we are clearly of the opinion that this should be used only with the concurrence of the prescribing physician. The quantity requisite to prevent precipitation is quite small and, in our opinion, without therapeutic effect. Probably, 1 fluid drachm might be sufficient for a 4-oz. mixture containing some water. Care should be taken that, if any resin of cannabis separates, it may rise *to the top*, which may be done by using a proper quantity of syrup (instead of water) to increase the density of the solution. Then, even if the tincture of soap-bark cannot keep the resin in suspension permanently, the latter will collect on top, and may be re-incorporated by shaking once or twice.

No. 1,224.—**Carmine Solution** (C. Ph. G.).

The formula for carmine solution, which we quoted, on page 338 of our last volume, from Prof. Lloyd's book on elixirs, contained an error which escaped us, but which has been corrected in the new edition of this work. The quantity of glycerin had not been indicated. It should read as follows:

Carmine, No. 40.....60 grains
Distilled Water,
Glycerin, of each.... 4 fl. oz.
Ammonia Water, a suff. quant.

Powder the carmine, and triturate with the water, gradually adding ammonia water, until the carmine disappears, and a dark red liquid, free from insoluble matter, remains. To this add the glycerin, and mix.

No. 1,225.—**Extract of Beef** (H.).

Analyses of commercial extract of beef have been published by various authors, for instance by A. Ott in *Dingler's Polytechnisches Journal*, vol. 211, p. 46; by J. Ringl, *ibid.;* by F. Wagner, *ibid.;* by Fresenius in the *Berichte der landwirthsch. Versuchsstation*, Darmstadt, 1874. You will also find the composition of a number of different commercial extracts of beef on p. 273 of NEW REMEDIES for 1882, which article will also give you other valuable information. Compare also, NEW REMEDIES, 1881, p. 218; 1880, p. 9; 1883, 56. Besides numerous articles scattered through periodicals and encyclopedias, we are not aware of a special work treating of extracts of beef.

No. 1,226.—**Manufacture of Alum** (H.).

For works of reference on this subject we can recommend Muspratt's Chemistry and Fr. Jünemann, Die Fabrikation des Alauns, etc., 8vo, Wien (Hartleben. 2.50 marks).

No. 1,227.—**To Keep Water from Freezing** (Dr. J. C. H.).

1. What percentage of alcohol *alone* is necessary to keep water from freezing at 32° F. and 0° F.? 2. What proportion of glycerin alone at same temperature? 3. And what proportion of a mixture of equal parts of alcohol and glycerin? It is desired to ascertain the exact amount or the least amount necessary.

To answer this question it will be necessary to make quite an extended series of experiments which involve no special skill, but will consume some time. As we happened to have at our disposal, just at present, a very accommodating winter temperature of about 32° to 30° F., we made a series of mixtures containing alcohol and water, glycerin and water, and alcohol + glycerin and water, and exposed them for over 24 hours to the cold air. A bottle containing pure water, exposed at the same time, froze over night (lowest temperature registered 28° F.). All the mixtures we made, the lowest of which contained four parts of water to one part of the liquids above mentioned remained liquids. We do not think that we have arrived at the limit, but we have probably come pretty close to it. We suggest that our correspondent continue the experiment himself. Let him prepare a series of mixtures, say one or two fl. oz. of each, of water and the other liquids taking 95, 90, 85, 80, 75, 70, etc., parts of the former, and 5, 10, 15, 20, 25, 30, etc., parts of the latter, put them into vials or tin boxes and expose them to the temperature at which the experiment is to be made. In this way, he will easily ascertain the lowest percentage of alcohol, etc., which will keep the water from freezing. We are not aware of any publication in which the desired proportions for the above temperatures are set forth.

No. 1,228.—**Precipitate formed by Mixing Solutions of Extract of Meat and Ammonio-Citrate of Iron** (F. H.).

"When a clear solution of Liebig's Extract of Meat in Sherry is added to a clear solution of Ammonio-Citrate of Iron in Sherry, a deposit occurs immediately. I do not know the cause. Can you tell me?"

Under ordinary circumstances, when the solutions are made in the cold, we believe there should be but little, if any precipitate. On trying the mixture on a small scale, we observed not more than a very faint cloudiness within a few hours, and this cleared up on addition of acetic acid. Still, it must be remembered that extract of meat contains acid phosphates soluble in water but insoluble in strong alcohol. Sherry being comparatively weak in alcohol, dissolves a certain amount of these salts, which are very apt to be gradually precipitated. We would suggest that our correspondent examine whether this precipitate occurs in his hands, always; also, whether the strength of the two solutions has any bearing on the formation of the precipitate.

No. 1,229.—**Solution of Chinoidine** (S. D. L. L).

This correspondent wants to know how to dissolve chinoidine without using an acid. In reply we would say that the only suitable solvent appears to be alcohol. It may be made into an elixir by dissolving a suitable quantity in strong alcohol to which some flavoring oils have been added, and then adding glycerin and syrup. Still, no matter how it is dissolved, it always has more or less of a disagreeable, bitter taste. The best way to administer it, is in form of powder, or in capsules.

No. 1,230.—**Logwood Ink** (Dr. N. B. S.).

We are asked the following question: "Do you know any *sure* way of making the Logwood and Chromate of Potassium Ink (Runge's) so that it will not gelatinize or deposit its coloring matter? I have used the carbonate of soda method unsuccessfully."

In reply we have to state that we do not know any certain method. But, so far as we can learn from various authorities in our possession, it seems that there should be but little if any sediment if the ink was properly made.

On the authority of a German technological journal, we gave some formulæ for logwood inks on p. 92 of NEW REM. for 1881, and a correction to these by Mr. Turner Bushwell was published on p. 116 of the same vol. At present we will publish a correct formula for making Runge's Logwood Ink. Perhaps the trouble will disappear if this is carefully followed.

Twenty kilos (44 lbs.) of finely rasped logwood are boiled in a kettle with 120 liters (32 gallons) of water, until about 20 liters (5¼ gallons) of the water have been boiled off. The decoction, which has a fine red color, is then separated from the chips by straining through close-woven muslin, and poured into a tub or other suitable vessel.

A solution of 1 part of neutral (yellow) chromate of potassium having been made in 10 parts of water, a quantity of this solution, containing exactly 10 grammes of the salt, is now added, and the liquid stirred. If necessary more of the chromate solution is added until a sample transferred to a test-tube no longer appears violet or reddish by transmitted light. The addition of the chromate solution is interrupted when a sample has a black color and no longer permits light to pass.

In order to have data on hand for subsequent operations, specimens of writing, prepared with each sample of ink, up to the moment of its completion, may be kept. The exact ratio of logwood and chromate should also be noted. After the writings have been exposed for some time, it will readily be perceived which proportion will be the best.

This would be of particular use to know if the logwood used in the process is only a small portion of a large stock on hand, all of which might be supposed to be of the same quality.

Instead of using logwood itself, the commercial extract *may* be used, but as this varies in quality, it does not always yield a satisfactory result.

The proper proportions are:

Extract of logwood..	2 kilos.
Yellow chromate of potassium.....	10 grms.
Water.....100	kilos.

The salt is dissolved in the water, contained in a tub. The extract is broken into small pieces, tied loosely in a cloth and suspended in the liquid. It will dissolve with production of a deep-black color. If necessary, a little more chromate may be added.

Runge's formula contains no alum, so far as we know. There are, however, several other formulæ for logwood ink quoted here and there, which contain alum as an ingredient.

Compare also NEW REM., 1880, p. 375.

No. 1,231.—**Wine of Pepsin** (R. G. W.).

A clear Wine of Pepsin may be obtained as follows:

Pepsin (not saccharated).....	40 parts.
Glycerin.....	100 "
Hydrochloric Acid.	10 "
Sherry Wine 2,000	"

Triturate the pepsin with the glycerin and a little of the wine; then mix with the remainder of the wine and the acid. Set the mixture aside for five or six days in a dark place, occasionally agitating. Finally filter through a well wetted double filter, returning the first portion of the filtrate until this this runs off clear.

If it cannot be obtained clear by filtration, some clarifying agent must be used. For this purpose, isinglass or the white of eggs may be used. Russian isinglass is beaten with a hammer until it may be easily disintegrated by the fingers. A little water is then poured upon it and renewed several times during 24 hours, to remove all foreign odor. All the excess of water is now squeezed out, the isinglass picked into fine shreds, put into a suitable bottle or vessel and some of the wine poured on it, with which it is

most thoroughly mixed by whipping with a quirl or other instrument. (If a gallon of wine is to be clarified, about 30 grains of isinglass are required, and these are to be intimately mixed or whipped with about 2 or 4 oz. of the wine.)

This mixture is then added to the bulk of the wine, and the whole set aside in a dark place until the impurities have settled, which will require eight or ten days.

White of eggs may be used in a similar manner.

No. 1,232.—**Flavoring for Carbolic Acid** (L.).

It is altogether a matter of taste what flavoring would be preferred for a solution of carbolic acid to be used as a gargle. Any of the more pleasant essential oils, such as oil of orange, lemon, sassafras, anise, fennel, peppermint, etc., or some orange-flower or rose water may be used. There is almost no end to the changes that may be rung.

No. 1,233.—**Calo and Chlorate of Potassium.**

DEAR EDITOR:—By igniting on platinum foil calomel and potassic chlorate, a red mass is obtained, consisting of mercuric oxide and mercuric chloride: $3Hg_2Cl_2 + KClO_3 = 3HgO + + 3HgCl_2 + KCl$.

These products are always formed in constant proportions as related to the molecule. The present accepted chemical constitution of calomel is

Hg—Cl
|
Hg—Cl.

Does not the above fact show that the chlorine atoms are in combination with one mercury atom, and that the mercuries play a separate and distinct part in the molecule? Yours, etc.,

E. D. DRAKE.

TOLEDO, O., December 25th, 1883.

We do not think that the above could be reckoned to be certain proof for the theory alluded to by our correspondent, although it might be at first supposed to be one. If the reaction is supposed to take place between *three* molecules of calomel and *one* molecule of chlorate of potassium, then the oxygen of the latter will combine with the whole of the mercury of one atom of calomel and with *one-half* of the mercury of a second atom. It is this circumstance which might induce one to uphold the above-mentioned theory. Yet we may also, with perfect safety, suppose that the reaction takes place between *six* molecules of calomel and *two* molecules of chlorate of potassium. In this care, all the oxygen of the latter unites with all the mercury of three molecules of the calomel, while the liberated chlorine unites with the other three molecules of calomel to form bichloride.

No. 1,234.—**Manufacture of Bleaching Powder** (S. M.).

This correspondent surprises us by the announcement that he "thinks of engaging in the manufacture of bleaching powder."

He asks for certain commercial information, and also wants to know if there is any book which treats of its manufacture and preparation for the market.

We are sorry to inform our correspondent that unless he is the possessor of a very large capital, and has the best facilities for receiving his crude materials and for shipping his products, he will not succeed. Besides, the very fact that he does not appear, as yet, familiar with any literature on the subject makes it very doubtful whether he would succeed even if he had the capital.

Bleaching powder or chloride of lime, though one of the most important and largest turn-outs of chemical works, is really more of a by-product, or rather, the process for making it is carried on just as much for the purpose of preventing immense amounts of chlorine from being discharged in the air and lost, as for the purpose of preparing the product itself. In large alkali (soda) works, where thousands of tons of common salt are converted into soda ash and sal soda by means of sulphuric acid (made on the spot, in immense quantities), the escaping vapors of hydrochloric acid are made to traverse large towers where the gas comes in contact with a fine rain of water, and is converted into liquid acid. This is afterwards decomposed by manganese dioxide, and the generated chlorine conducted into chambers containing lime.

It is impossible to make chloride of lime economically for itself; it can only be made with profit as a side product of the soda industry.

The most complete work on the alkali manufacture (including chloride of lime) is the following: Lunge, G., A Theoretical and Practical Treatise on the Manfacture of Sulphuric Acid and Alkali. 3 vols. 8vo. London: 1880–1882. ($32.00.)

Another useful work is: Lomas, J., Manual of the Alkali Trade, Sulphuric Acid, Sulphate of Soda. Bleaching Powder. 8vo. London: 1880. ($17.00.)

Formulæ and Information Wanted.

a) Composition of *Gombault's Caustic Balsam.*

b) Flavoring ingredients in *Sozodont Tooth Wash.*

c) One correspondent asks "how Ginseng (!) is clarified." The writer is asked to revise his query.

d) Hampton's Vegetable Tincture. Correspondent wants to know whether it has ever been analyzed.

e) Compound Tincture of Orgeat.

f) Harden's Fire Grenade.

g) Blair's Pills for Rheumatism.

NEW PATENTS.

[Complete specifications and illustrations may be obtained of any one or more of the following patents by sending the number, title, name of patentee, with twenty-five cents for each copy, to the Commissioner of Patents, at Washington, D. C., together with the name and address of the person requesting the same.]

288,323 and 288,324. *Process of and Apparatus for making Ammonia.*—Thomas B. Fogarty, Brooklyn, N. Y.

288,402. *Apparatus for Measuring the Density of Liquids.*—Nicholas Borodoulin, Krakov, Russia.

288,487. *Gas-Chamber in Soda-Water Apparatus.*—Charles A. Prentiss, Washington, D. C.

288,547. *Percolator.*—Ezra W. Carter, Cohoes, and David R. Smith, Green Island, assignors of one-half to Richard S. Clark and John McCleary, both of Cohoes, N. Y.

288,603. *Pneumatic Stopper for Bottles.*—Wilhelm von Schlieffen, Schlieffenburg, Germany.

288,617. *Stand for Bottles and Flasks.*—Daniel R. Bradley, New York, N. Y.

288,630. *Veterinary Medicine.*—Furney F. Green, Comanche, Texas. Consists of wormseed oil, oil of turpentine, castor-oil, tincture of myrrh, common molasses, pulverized bark of black alder (*Prinos*), pulverized white Indian hemp root (*Apocynum cannabinum*), pulverized bitter-root (*Apocynum androsæmifolium*), pulverized pink-root (*Spigelia*), pulverized mandrake-root (*Mandragora officinalis*), powdered balmony (*Chelone glabra*), and Socotrine aloes.

288,702. *Manufacture of the Extract of Malt.*—James W. Forbes, Cincinnati, Ohio.

288,744. *Machine for Filling Bottles.*—Horace M. Tubbs, and Edwin T. Swartz, Philadelphia, Pa., assignors to Charles E. Hires, same place.

288,828. *Syringe.*—Patrick J. McElroy, East Cambridge, Mass.

288,859. *Bottling Faucet.*—Alfred Rigney, New York, N. Y.

288,860. *Confection Grinding Apparatus.*—Jas. B. Rivera, Baltimore, Md.

288,870. *Rotating Sample-Stand.*—Christian A. Schmidt, New York, N. Y.

288,945. *Truss.*—William B. Kimball, Peterborough, N. H., assignor to Elbridge Howe & Co., same place.

288,972. *Truss.*—Issac P. Bottsford, Cromwell, Conn.

289,963. *Head for Siphon Bottles.*—John Brown, Medford, Mass.

289,100.—*Deodorized Fat or Oxyline.*—John Hobbs, Boston, Mass.

289,293. *Apparatus for Concentrating Sulphuric Acid.*—Samuel T. McDougall, Brooklyn, N. Y.

289,487. *Hog-cholera Remedy.*—George Washington Wynns, Union, N. C. Consists of opium, camphor, guaiacum, capsicum, peppermint, sulphate of iron, and sulphate of copper.

289,528. *Syringe.*—George Washington Goodner, Chicago, Ill.

289,547. *Dispensing Faucet for Soda-Water and Other Beverages.*—Estate of John Matthews, New York, N. Y.

289,586. *Perfumery Stand.*—Albert Warmer, Hoboken, N. J.

289,621. *Cleaning Compound.*—William E. Clark, St. Louis, Mo. Composed of sulphuric ether, alcohol, salts of tartar, oil of cloves, pulverized borax, ammonia salts, and deodorized gasoline.

289,673. *Tonic Bitters.*—Henry Litz, Baltimore, Md. Consists of high wines, distilled water, hops, unripe oranges, zedoary-root, ginger-root, cardamum seeds, star anise seeds, bitter orange-peel, gentian root, cape aloes, myrrh, anisated liquor of ammonia, and tincture of nux vomica.

239,706. *Process and Apparatus for Distillation.*—James G. Pontefract, Pittsburgh, Pa.

289,714. *Bottling Device.*—Alfred Rigny, New York, N. Y.

289,737. *Tumbler Washer.*—John Tyler Whittle, Baltimore, Md., assignor of one-half to Jerome I. Vogeler, same place.

289,777. *Soda-Water Apparatus.*—John Matthews, New York, N. Y., Elizabeth Matthews, George Matthews, and Frederic Matthews, executors of said John Matthews, deceased, all of same place.

289,780. *Capsule Machine.*—Charles F. Purdie, Detroit, Mich.

289,785. *Evaporating Apparatus.*—John Stuart, Fraer, Iowa.

289,807. *Can Filling Machine.*—George W. Brown and Harry Lambert, Salem, Mass.

289,813. *Label for Bottles.*—William B. Dean, New York, N. Y.

289,814. *Combined Stopper, Cap, and Label for Bottles.*—William B. Dean, New York, N. Y.

289,836. *Process of and Apparatus for Obtaining Boracic Acid from Native Borate of Lime.*—John B. Hobson, San Francisco, Cal.

289,858. *Disinfectant.*—George E. Rice, Boston, Mass. Consists, essentially, of pipe-clay, phenol, caustic soda, sulphate of iron, chloride of zinc, and sulphite of lime, or its equivalent.

289,922. *Hair Tonic.*—Alexander Miles, Duluth, Minn. Composed of pine-tar, magnesium carbonate, glycerin, alcohol, quinia sulphate, extract of sage, and water.

290,095. *Truss Pad.*—Sherman R. Nye, Chicopee Falls, Mass.

290,105. *Evaporating Liquids.*—Narcisse Pigeon, Yonkers, N. Y.

290,252. *Manufacture of Lactates and Lactic Acid.*—George Austin Marsh, Littleton, Mass., assignor to the

Avery Lactate Company, Portsmouth, N. H.

290,253. *Manufacture of Lactates for the Production of Lactic Acid.*—George A. Marsh, Littleton, Mass., assignor to the Avery Lactate Co., Portsmouth, N. H.

290,294. *Manufacture of Lactic Acid and Lactates.*—Charles O. Thompson, Terre Haute, Ind., assignor to the Avery Lactate Co., Portsmouth, N. H.

290,561. *Siphon for Vessels.*—Frank J. Flockler, Allegheny City, Pa.

290,583. *Capsule Machine.*—Fred. A. Hubel, Detroit, Mich.

ITEMS.

California Pharmaceutical Society.—The regular quarterly meeting was held at the College Hall, 113 Fulton Street, Thursday evening, Dec. 13th, President Keil in the Chair. The meeting was well attended. Five new members were elected, and a number of interesting papers read; among them a paper on Bromhydric Acid, by Mr. A. Tommer, being a modification of Prof. Markoe's process; this paper was the continuation of a previous one on the same subject.

Mr. J. H. Barbot read a paper on a new process for making fluid extract of wild-cherry bark, dispensing with the use of alcohol in the menstruum. This paper called forth considerable discussion upon the subject. Mr. McDonnell gave vent, in a humorous way, to some practical notes relating to the spreading of blisters, followed by a paper on citrine ointment.

Mr. Runyon exhibited one of Dr. Squibb's apparatus stands, also a Berry pressure percolator, and a Franciscus gelatin pill-coating machine, which had been presented to the college and accepted with thanks. Mr. Lengfeld exhibited a specimen of ginseng, presented to Dr. Terrill while in Corea. The specimen referred to represented on the inner surface, after being fractured, the form of an idol, and said to be highly valued there when found to have this structure, the specimen alluded to being valued at $200.

Mr. Lengfeld also exhibited some ancient works on pharmacy, materia medica, etc., by M. Nicolas Lemery, published 1727, and a translation into English dated 1737.

E. W. Runyon exhibited an old work by Goulard—a treatise on lead preparations. Mr. Lengfeld called attention to the use of papayotin of late, and exhibited a sample made by E. Merck, of Darmstadt. Dr. Behr related that the juice of Carica papaya was eaten with milk by the natives of the tropics, and gave a full description of it.

Mr. F. C. Keil exhibited a number of samples of comp. syrup of hypophosphites and with iron. Mr. Dawson presented the Soctety with a sample of carbolic crystals made by R. Graesser, of Wales, England, through the kindness of Mr. Campbell.

Mr. Searby exhibited some seeds of Rheum palmatum sent to him from St. Petersburg, Russia, specimens of which he had given to parties who were to determine the most suitable locality for their cultivation; he also read a letter received from Mr. Colcord, Secretary of the National Retail Druggists' Association, which contained many good suggestions, heartily indorsed by the members.

Mr. Lengfeld gave notice that at the next meeting he would propose some alteration and amendment to the Constitution and By-laws, relative to having monthly instead of quarterly meetings.

Mr. Runyon also gave notice of a change in Chapt. II., Article 1, of the By-Laws. The meeting adjourned at 10.40 P.M.

FRED. GRAZER,
Secretary.

South Carolina.—At the last meeting of the State Pharmaceutical Society held in Columbia, the following were elected: *President*, Dr. H. Baers, of Charleston; *Vice-Presidents*, C. P. Aimar, of Charleston; Dr. John May, of Yorkville; *Secretary and Treasurer*, P. Wineman, of Charleston; *Examining Board*, A. W. Eckel, E. S. Burnham, C. F. Panknin, G. J. Luhn.

New York.—The Committee on Legislation of the Kings Co. Pharmaceutical Society, which has furnished much of the efforts that have been made to secure the enactment of a State pharmacy law, recommends another attempt to secure the enactment of the bill presented to the Legislature in 1883, with these modifications, viz., striking off the section imposing on druggists a yearly registration fee of one dollar, and the omission of the clause requiring the Secretary of the Board of Pharmacy to give bonds for securing the money received by the Board.

The Erie County Pharmaceutical Association has continued its Committee on Legislation of last year, viz.: Messrs. R. K. Smither, J. Rieffenstahl, and T. M. Johnson. There are good reports of the forthcoming College of Pharmacy to be established in Buffalo; the members of the Association seem to be about equally divided on the question of the desirability of sustaining the organization of a National Retail Druggists' Association.

Dr. Henry Bence Jones, who, following the death of the author of Fownes' well-known chemistry, carried the work through ten editions, died on the 21st of November, in consequence of an accidental gun-shot wound of the ankle which necessitated amputation.

Charles William Siemens, the electrician and engineer, died Nov. 20th. Ten days previous to his death he suffered a severe fall from which he did not recover, dying from rupture of the heart.

The Firm of Powers and Weightman, of Philadelphia, have admitted to partnership Drs. John F. Weightman, and William Weightman, Jr.

The Druggists Circular, so it is rumored, has become the joint property of Root and Tinker (owners of the *Weekly Drug News* and *Oil, Paint and Dug Reporter*), and Mr. John Newton, the former proprietor.

John Eliot Howard, F.R.S., probably the foremost quinologist of our time, died in London, on November 22d. He was born on December 11th, 1807. After passing through school, he became associated to his father, in the manufacture of chemicals, and devoted particular attention to quinine, becoming, in the course of time, one of the largest manufacturers of this and other cinchona alkaloids. He made detailed and extended researches into the botany and chemistry of the different species of cinchona, publishing a number of valuable works relating to this subject. He was one of the originators of the cultivation of cinchona in the East Indies, and rendered the government valuable services by advice and by chemical assays of cultivated barks. In October last, at a meeting of the Pharmaceutical Society, he was made the recipient of the Hanbury medal, for his distinguished services to science. It is particularly unfortunate that his death occurred just at this time, when the researches of Mr. Trimen on the botany of cinchona in India are promising to revolutionize the whole classification adopted by Howard and others, since the discussions likely to arise between Mr. Trimen and other authorities will elicit much valuable information which would otherwise have remained dormant, although it would already appear as if Mr. Trimen will be able to show that all previous classifications of the species of cinchona have been more or less erroneous.

The Cuban Pharmacopœia.—On the 8th of February, 1883, a commission was charged with the elaboration of a pharmacopœia for Cuba. The Commission is composed of four physicians and four pharmacists, two of the latter, professors at the Faculdad de Pharmacia de la Habana, and two keeping open shop. The four pharmacists were appointed by the Governor General, on the nomination of the Junta Superior de Sandidad. The four physicians were elected by the academy.

The Commission consists of Dr. Nicolas J. Gutierrez, President; Dr. Rafael Cowley, Dr. Juan C. Oxamendi, Dr. José Torralbas, Dr. José Ramos, Dr. Juan Zamora, Dr. Ramon Botet, Dr. Antonio Gonzalez, Dr. Joaquin Barnet.

PHARMACEUTICAL CALENDAR.—FEBRUARY.

Additions to and Corrections of the following Calendar are solicited.

Date.	Society Meetings.
Fri. 1st.	American Chemical Soc.—8 P.M., Univ. Building, New York City.
Mon. 4th.	Erie Co. (N. Y.) Pharm. Assoc.—Buffalo, N. Y.
Tues. 5th.	Maryland Coll. Pharm.—Baltimore.
	St. Joseph (Mo.) Pharm. Assoc.
	Connecticut Pharm. Assoc.—Annual Meeting at New Haven.
	Massachusetts Coll. of Pharm.—Boston.
	Kings Co. (N. Y.) Pharm. Soc.—Brooklyn.—Annual Meeting.
	National Coll. of Pharm.—Washington, D. C.
Wed. 6th.	Indianapolis Assoc. of Pharmacists.
Thurs. 7th.	Louisville Coll. of Pharm.
Tues. 12th.	Philadelphia Coll. of Pharm. Alumni Assoc.
	St. Louis Coll. of Pharm.
Wed. 13th.	Cincinnati Coll. of Pharm.
Wed. 13th.	New York Board of Pharm.
Thurs. 14th.	Newark (N. J.) Pharm. Assoc.
	Philadelphia Coll. of Pharm. Alumni Assoc.
	Maryland Coll. of Pharm.—At Baltimore.
	N. Y. German Apoth. Soc.—10 P.M., Beethoven Hall.
	Lancaster Co. (Pa.) Pharm. Assoc.
Tues. 19th.	St. Louis Coll. of Pharm. Alumni Assoc.—8 P.M.
	Philadelphia Coll. of Pharm.
	St. Joseph (Mo.) Pharm. Assoc.
Thurs. 21st.	New York Coll. of Pharm.
Tues. 26th.	Boston Druggists' Assoc.
Thurs. 28th.	Kings Co. (N. Y.) Board of Pharmacy.—At Brooklyn.